

Modern **LITHOGRAPHY**

MARCH - 1947 - VOLUME 15 - NUMBER 3

ml



Permanent Purple 62P

Senelith Inks

were the first lithographic inks
made from dyestuffs
treated with sodium tungstate
for better sunfastness
and are still leading
with their outstanding resistance properties

Our booklet, "Ink, Lithography and Printing" may be obtained on request

The Senefelder Company, Inc.

"Everything for Lithography"

32-34 Greene Street

New York 13, N. Y.

At last!

**How to preserve paper
humidity at constant,
predetermined levels—
and eliminate loss!**

Here is something really new ... something the printing and lithographic industries have long needed!

Aquastop M-V-Bar is a brand new, inexpensive, simple-to-handle material developed to *preserve* the humidity content of your paper *indefinitely*, at predetermined levels. Aquastop M-V-Bar imprisons the moisture within your paper at the humidity level you want—so that the paper will retain its workable characteristics for as long as you want, *regardless of fluctuations in the relative humidity outside, in your press room or storage space*. Think of the savings in precious, hard-to-get paper ... savings in press time ... savings in down time ... savings in customer good will ... and savings in wear and tear on tempers!

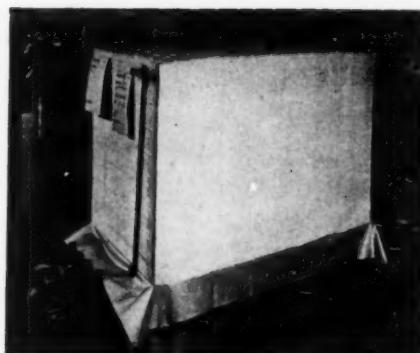
And the beautiful thing about Aquastop M-V-Bar is its simplicity. No complicated readings ... no temperamental gadgets or instruments to get out of order. Observe how easy it is to use, from the photos shown at the right. Two men with Aquastop M-V-Bar can preserve the humidity of a skid-platform of paper in a matter of seconds ... a whole press room in a matter of minutes!

And observe from the prices below, how inexpensive! Particularly since tests show that Aquastop M-V-Bar may be used *again and again* without deterioration. The material may be flexed a *minimum* of 135,000 times at 20 degrees below zero without cracking. Made of a synthetic impregnated, coated and chemically-treated moisture and water proof fabric, Aquastop M-V-Bar successfully resists cracking, loss of flexibility, scuffing and abrasion ... maintains its effectiveness at maximum relative humidity.

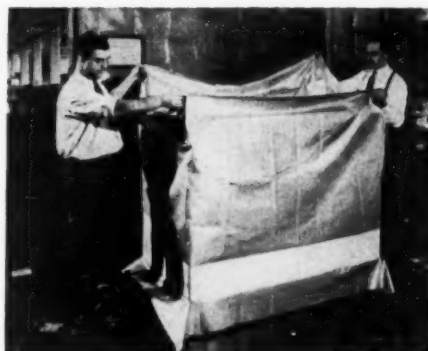
Aquastop M-V-Bar, exclusive with Roberts and Porter, Inc., is another R & P first. It is tried and tested. Send you order *today*. Prices below.

STANDARD SIZES	SELLING PRICE
21" x 26" x 24"	\$ 8.00
26" x 40" x 30"	11.50
32" x 46" x 30"	14.75
40" x 52" x 40"	23.00
45" x 58" x 40"	25.50
46" x 62" x 40"	26.75
50" x 72" x 48"	31.50

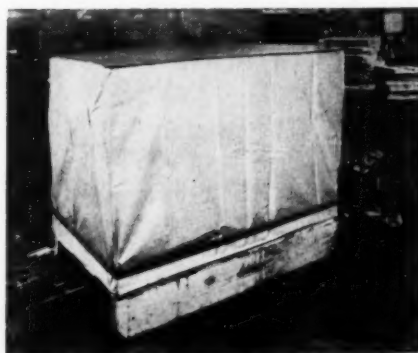
**Order
Aquastop
M-V Bar
Today!**



Printed sheets from the presses are loaded on skid platforms upon which Aquastop M-V-Bar has just been placed.



When the skid platform is full, an envelope of Aquastop-M-V-Bar is placed over the top of the load, securely imprisoning the humidity.



Edges of the Aquastop M-V-Bar on the bottom of the skid are brought up and the envelope drawn over them and sealed.

CHICAGO
402 South Market St.

NEW YORK
622-626 Greenwich St.

DETROIT
477 Selden Ave.

BOSTON
88 Broad St.

**ROBERTS &
PORTER, INC.**

"In Canada, it's THE CANADIAN FINE COLOR COMPANY with offices at Toronto and Montreal."

WHY

this great demand for more Miller Automatics?

Why have nearly 70% of Miller Major users ordered more Miller Majors? There are many favorable factors, but it remained for a shrewd superintendent of an exclusively Miller pressroom in the east, simply to hold up three fingers and point off (1) **speed** (2) **quality** and (3) **steady operation**. Abnormal postwar conditions had not confused him—or turned his attention from these three essentials of profitable printing.

Speed, quality and dependability are three indispensable factors which have established Miller Automatics as the most profitable producers for the greatest number of America's commercial pressrooms. Investigate Miller Automatics if you are interested in the three basic profit factors which give so many Miller owners reason to install more and more Miller Automatics.



(1)
Speed

2 to 1 Harmonic bed motion provides short bed stroke and smooth reduced speed bed reversal; no air plungers. Deeply ribbed, rigid but lightweight alloy bed. Compact, integral construction of bed, feeder and delivery on one foundation; easy to watch, reach and adjust. As much as 33 1/3% higher operating speeds than similar presses.



(2)
Quality

"Ink mill" rotary type inker evenly and thoroughly agitates and distributes ink. Positive control feeder holds sheets constantly under control for hair-line register. Heavily ribbed cylinder and journals are one rigid casting. Massive one-piece wayframe supports heavy impression. 3-speed slow-down delivery stacks sheets evenly, within open view.

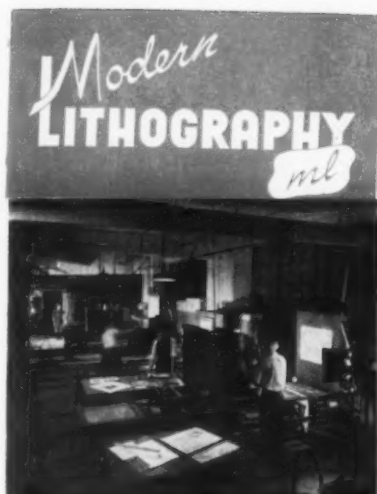


(3)
Steady Operation

All-steel gearing. Roller, ball and graphited bronze bearings. Nitralloy, magnesium, silicate and aluminum alloys liberally and scientifically utilized for durability. Automatic oiling for adequate lubrication. Silent chain drive, no stretching or slipping. Automatic trips, "ball-up" detector, "safety release" inker, reduce press stops and lost time.

MILLER PRINTING MACHINERY CO.
PITTSBURGH 12, PENNSYLVANIA

"**Miller** size and modernize"



THE COVER

Some of the 12 cameras in operation at the Varick Street plant of National Process Co., New York. The company is moving to Clifton, N. J. over a period of many months, without interrupting operations.



ROBERT P. LONG
Editor

IRENE H. SAYRE
Technical Editor

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Business Manager

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254 W. 31st St., New York 1, N. Y.

MARCH, 1947

VOLUME XV, No. 3

What You Will Find in this Issue

Editorials	29
Tone and Color Control	30
By Paul W. Dorst	
The Concentrated Arc Light, A Practical Photomechanical Application	37
By G. B. I. Miller	
Creating a Selling Package	39
By Thomas D'Addario	
An Unusual Personnel Program	40
An Aid to Veterans Entering Lithography	42
By Walter E. Soderstrom	
Paper Problems	51
Through the Glass	53
About the Trade	59
Litho Club News	77
Equipment & Bulletins	81
Technical Briefs	97
Classified Advertising	101
Index to Advertisers	105
Tale Ends	106

MODERN LITHOGRAPHY

Reg. U. S. Pat. Office

SUBSCRIPTION RATES: One year \$3.00, two years \$5.00. In Canada one year, \$4.00. Group subscriptions: (U. S. only) Four or more entered as a group, \$1.50 each. (May be sent to different addresses.)

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PAPER samples

Lithographers' Choice

BULKLEY, DUNTON & CO.

Fine Papers Since 1833



When your paper samples
arrive in this folder, you are
always assured of getting the products
of America's leading mills.



BULKLEY, DUNTON & CO.

295 MADISON AVENUE, NEW YORK 17, N. Y.

HUNT'S

New Formula

PREMIUM GRAPH-O-LITH DEVELOPER*

FOR LINE AND HALFTONE NEGATIVES
ON PROCESS FILM,
STRIPPING FILM, AND PAPER



NOW available
to the industry



The PERFECTED FORMULA, AN ACHIEVEMENT IN CONTINUOUS RESEARCH
—with superior life and working qualities shop-tested and PROVED better!

GIVES YOUR NEGATIVES THESE ADVANTAGES AND QUALITY FEATURES

- Pin Point shadow detail due to fine grain developing property
- Builds-up ALL dots and lines with constant density, uniform opacity
- Minimizes halation and irradiation
- Extremely long-lived, non-caustic, has a low pH
- Uniform developing properties, balanced formula throughout its life
- Tints developed with ease
- No fogging, no staining
- No printing through dots and lines on positive
- All effects of different waters entirely eliminated
- Readily dissolved, chemicals go into solution easily

This improved NEW FORMULA is the crowning achievement of progressive laboratory research and continuous experiments. Its processing advantages and finer quality features have been substantiated and PROVED better under actual working conditions in various shops. Improve the quality of your negatives with HUNT'S perfected new formula PREMIUM GRAPH-O-LITH DEVELOPER. Effective immediately this perfected new formula replaces the former PREMIUM GRAPH-O-LITH DEVELOPER. Available in 1—5—50 gallon size containers, order from nearest HUNT branch, prompt deliveries and freshness assured. Our Technical Service can help improve your negatives and solve your problems.

OUR THANKS!

to the many firms who
pioneered, tested, and
PROVED the finer work-
ing qualities of this im-
proved new formula in
their shops.

PHILIP A. HUNT COMPANY

ESTABLISHED 1909

BROOKLYN 22, N. Y.

CHICAGO, ILL.

CLEVELAND, OHIO

CAMBRIDGE, MASS.

LONG ISLAND CITY, N. Y.

LOS ANGELES, CALIF.

* Reg. U. S. Pat. Off.



Never before such operating economies

FACILITIES are provided here to promote ease of control, speedy handling, and precision production of high-quality work. To the owner, these features result in larger profits from savings in time and labor, and increased prestige because of superior output. To the operator, they provide quicker and smoother operation and sparing of ruffled nerves.

Rigid, all-metal construction; individually adjusted 4-point suspension camera bed; precision-ground mono-rail and tracks full length of the bed for lens

and copy board stands; vibration-free carriage; lens board, copy board, screen holder, and ratio focusing-tape controls all centered conveniently in darkroom; counter-balanced copy holder tilts to horizontal at easy-working level, takes copy up to $\frac{1}{2}$ " thick and can be quickly adapted to transparency copy.

Ask your ATF Salesman for new illustrated folder describing these and other features that speed work, make handling easier, and result in lower operating costs and increased profits in the darkroom.

ATF also makes complete equipment for the lithographer from sheet-fed offset presses to large web-fed, multi-color presses, and offset platemaking equipment, in matching sizes.

American Type Founders

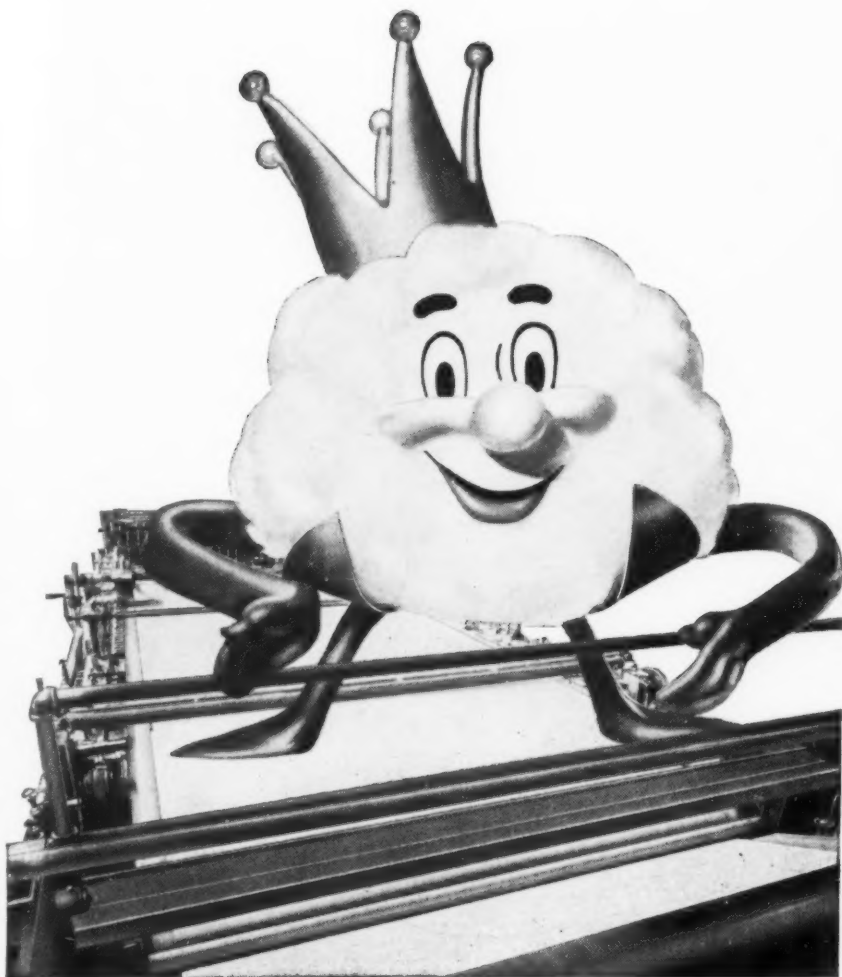
OFFSET DIVISION

200 Elmora Avenue, Elizabeth B, New Jersey



BRANCHES IN PRINCIPAL CITIES

MODERN LITHOGRAPHY, March, 1947



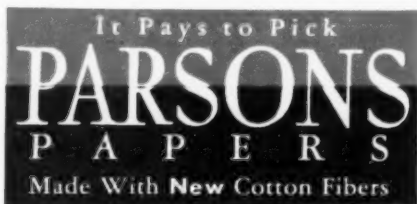
KING COTTON KNOWS *high quality paper*

NOW and then King Cotton visits the best fine paper mills. He likes to come to PARSONS' to see how well we treat the new cotton fiber that goes into PARSONS papers. He's happy here because he always finds that the careful processing of modern business papers is worthy of the high quality cotton fiber.

Given the chance, King Cotton will watch over your records, your letters, your documents so they'll do best the job you want them to do. Paper must be made with cotton fiber to be as useful as it can be for business stationery and record-keeping.

The most attractive letterheads are on cotton fiber paper, with its brisk, clean, smooth finish and its superior writing and erasing qualities. All records kept on cards or sheets will be safer for longer, and have greater legibility, on cotton fiber paper.

If you want stationery and documents to reflect *quality*, if you want your records to have permanence, remember King Cotton, and that *it pays to pick Parsons*.



PARSONS PAPER COMPANY, HOLYOKE, MASSACHUSETTS

© PPC, 1947

MODERN LITHOGRAPHY, March, 1947

King Testifies On Parsons Quality

Holyoke, Massachusetts:— King Cotton, the symbol of quality in fine papers, visited the PARSONS mill and told reporters of his pleasure at the fine processing given the new cotton fibers used in all PARSONS papers. "Even though a mill does use the best materials," he said, "plenty of know-how must go into paper manufacturing. If the machines don't have adequate supervision by experienced men, and automatic quality controls, as is the case at PARSONS, even the choicest materials can't be turned into really fine paper."

King Cotton is making personal appearances in a series of advertisements for PARSONS in behalf of quality-conscious printers and paper merchants all over America. These advertisements go to an audience of nearly half a million leading paper buyers through Fortune and Business Week.

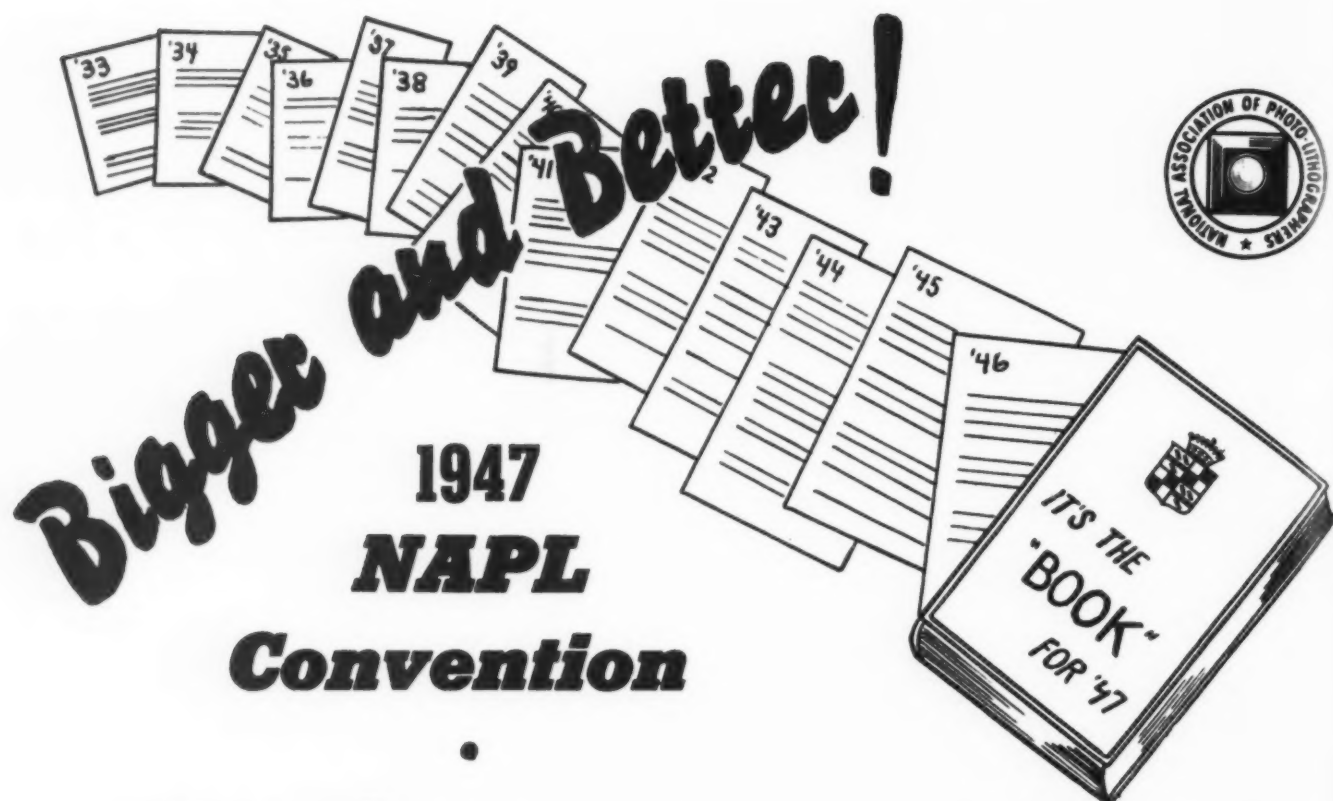


The two publications through which PARSONS advertising reaches the leading half million buyers of papers for business.

Specialists in record-keeping papers and business and professional stationery well know the importance of new cotton fibers. They realize that "saving" a few cents a pound by buying poor quality paper is no saving at all. In record-keeping papers it frequently means re-typing a complete set because the cards or sheets get dog-eared, torn and worn. In stationery cheap, limp, rough unattractive paper is costly because it's poor salesmanship. The solution in either case is cotton fiber paper, especially PARSONS paper. It is King Cotton's mission to take this message to buyers of paper who may not realize the importance of quality in business papers.

Beyond the King Cotton campaign in the magazines shown above, another series of advertisements is directed solely to buyers of ledgers and index-bristols. There he tells the advantages of PARSONS papers to the readers of Banking, Burroughs Clearing House, Bankers Monthly, the Journal of Accountancy and Credit & Financial Management.

These two national advertising campaigns help America's authorities on paper quality — paper merchants and printers — to convince buyers that it is wise to buy paper made with new cotton fibers and that it pays to pick PARSONS.



Four Days — October 22-23-24-25

HOTEL BOOK-CADILLAC — DETROIT, MICH.

« Exhibits »

Exhibit space is available on the basis of First Come, First Served. This year's Convention will be four days instead of three, to give exhibitors more time to show their wares. We anticipate that the program will deal with Labor, Costs, Markets and Management—a program that will be a "must" for every lithographer in the country.

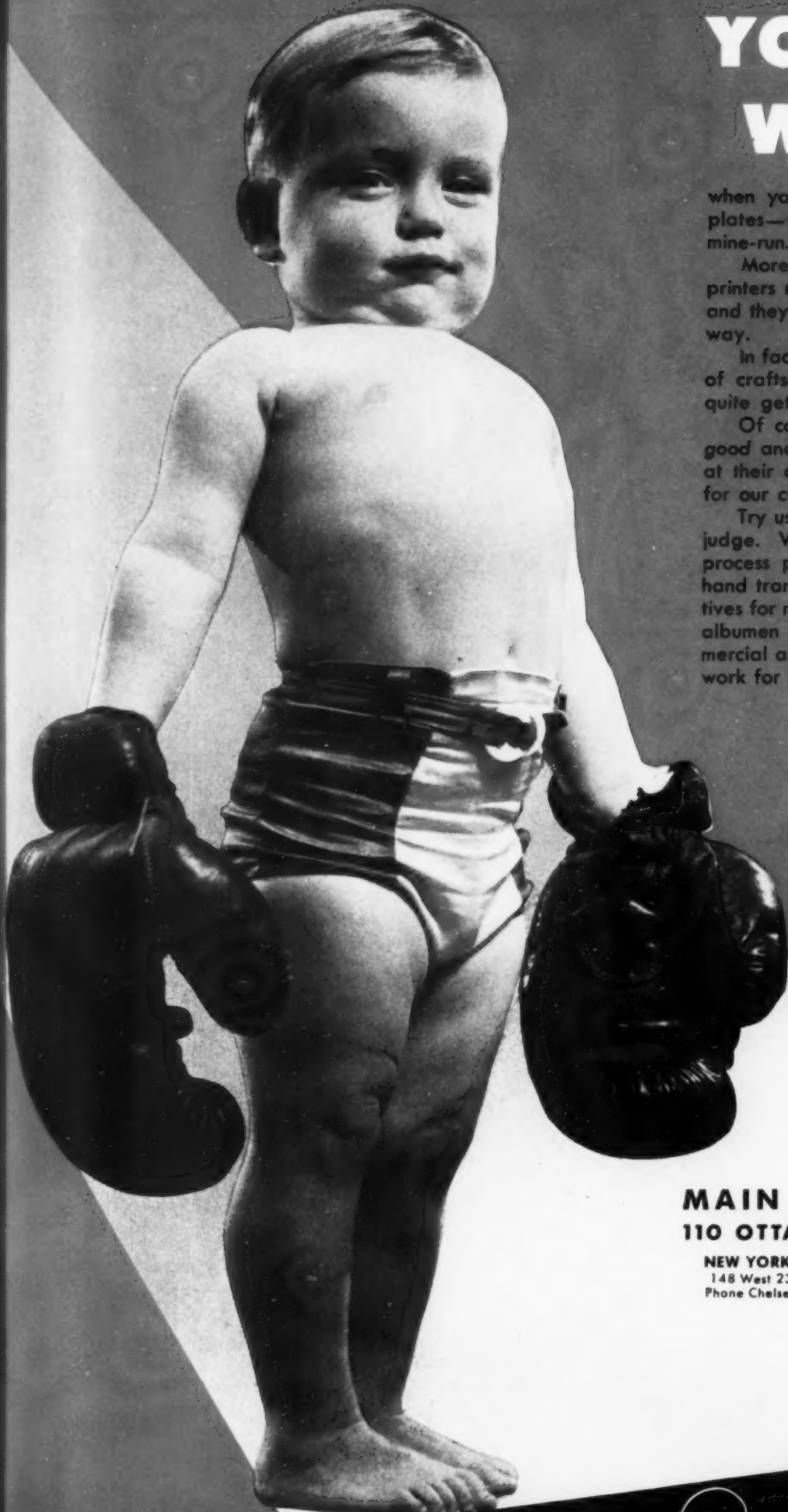
A large portion of the exhibit spaces have already been sold. Units sold are: 1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 31, 33, 34, 35, 39, 41, 45, 46 and 47.

Reserve space immediately if you plan to show your wares at this vital convention. Floor plan with complete information available on request.

NATIONAL ASSOCIATION OF PHOTO-LITHOGRAPHERS

1776 BROADWAY

NEW YORK 19, N. Y.



YOU'LL SWELL WITH PRIDE

when your work is being produced from Graphic Arts plates—so vastly superior are they to the ordinary mine-run.

More than 200 of America's leading lithographers and printers regularly depend on us for their requirements—and they want only the best, for that's how they got that way.

In fact, we too swell with pride over the fine specimens of craftsmanship turned out by our staff—never could quite get over it.

Of course our men are not just average, but really good and then too they have the latest type equipment at their command. That's why we can effect economies for our customers.

Try us on one job of any kind—and then you be the judge. We can serve the most exacting needs in color process plates, black and white, highlites, originals for hand transfer, posters, line or halftone negatives or positives for machine transfer, photo-composed press plates—albumen or deep etch, direct color separations, commercial art, commercial photography, or any preparatory work for the offset or letterpress printer.

● WE DO NOT
OWN PRESSES

MAIN OFFICE TOLEDO 4, OHIO
110 OTTAWA STREET PHONE GARFIELD 3181

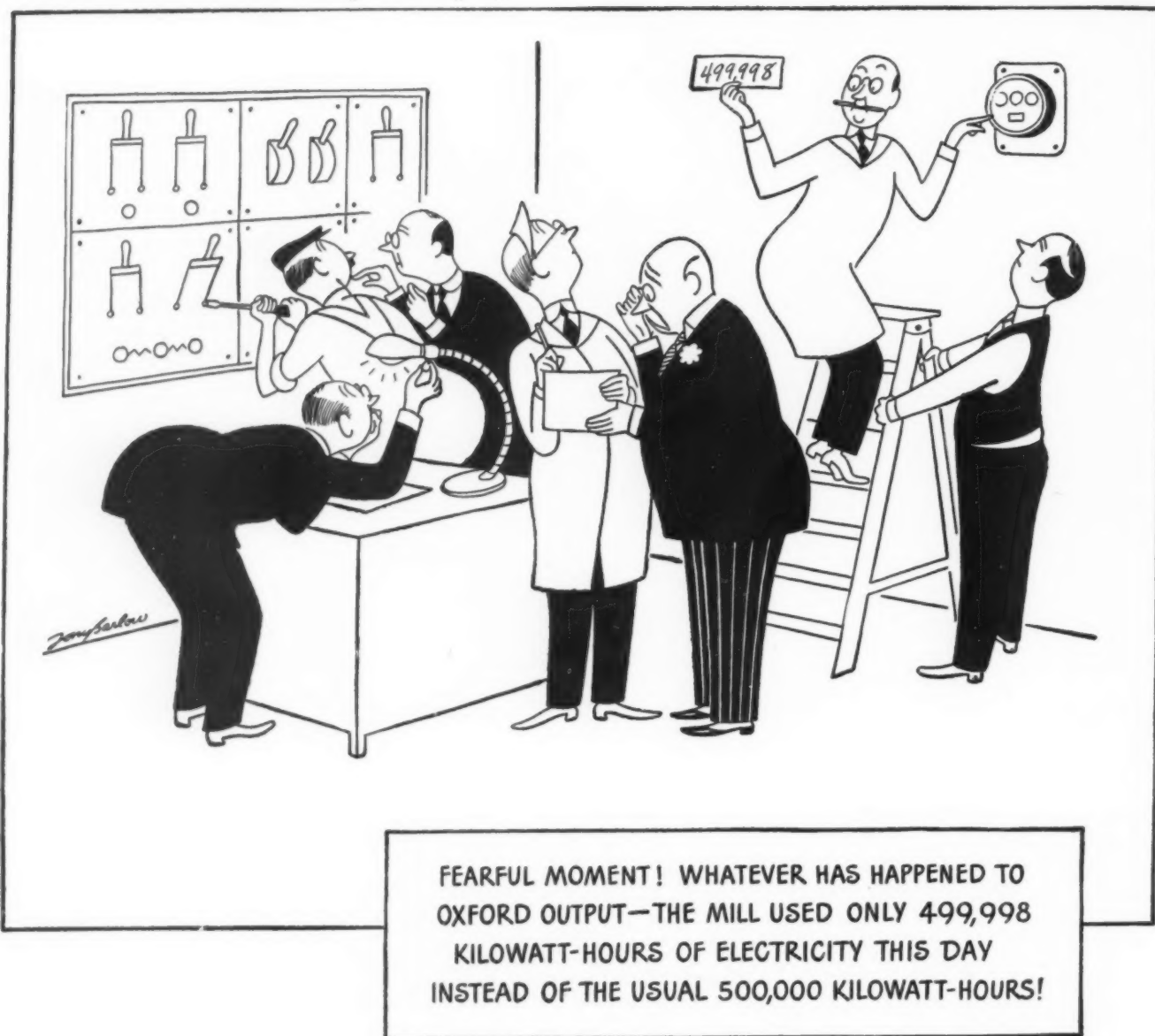
NEW YORK OFFICE
148 West 23rd Street
Phone Chelsea 3-5309

DETROIT BRANCH
825 West Elizabeth
Phone Randolph 9122

CHICAGO OFFICE
201 North Wells Street
Phone Randolph 5383

Graphic Arts Corporation OF OHIO
MAKERS OF FINE PRINTING PLATES
TOLEDO • NEW YORK • CHICAGO • DETROIT

*We believe in, endorse and
help support the lithographic
Technical Foundation*



FEARFUL MOMENT! WHATEVER HAS HAPPENED TO OXFORD OUTPUT—THE MILL USED ONLY 499,998 KILOWATT-HOURS OF ELECTRICITY THIS DAY INSTEAD OF THE USUAL 500,000 KILOWATT-HOURS!

IN making over 1,000 miles of quality paper a day, the Oxford plant uses enough electrical power to supply a city of more than 250,000 people. A lot of power!

Typically, Oxford produces all this electricity in its own hydro-electric and power plants. It is another major example of Oxford's completeness of operation.

Every step of papermaking, from beginning to end, is directly under Oxford's control. From wood to finished paper, product quality is considered in each operation.

Consequently Oxford can set high quality standards and maintain them. In fact, over 5,000 separate laboratory tests for quality are made during each day's output—thus supplementing the skill and know-how of Oxford's

veteran papermakers.

To the user of Oxford Quality Papers this completeness and scrupulous care mean quality, uniformity and reliability of service.



Included in Oxford's line of quality printing and label papers are: ENAMEL-COATED—Polar Superfine, Mainflex, Mainflex C1S Litho, Mainfold and White Seal; UNCOATED—Engravatone, Carfax, Aquaset Offset, Duplex Label and Oxford Super, English Finish and Antique.

OXFORD PAPER COMPANY

230 PARK AVENUE, NEW YORK 17, N. Y.

MILLS at Rumford, Maine
and West Carrollton, Ohio

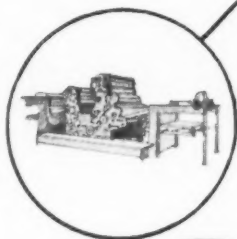
WESTERN SALES OFFICE:
35 East Wacker Drive, Chicago 1, Ill.

DISTRIBUTORS
in 48 Key Cities

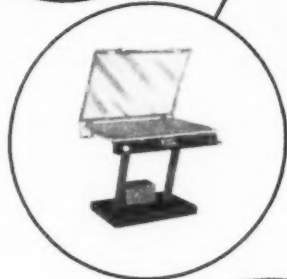
Zenith

PRODUCTS and SERVICES

OFFSET
PRESSES
REBUILT



VACUUM
PRINTING
FRAMES



TEMPERATURE
CONTROLLED
SINKS

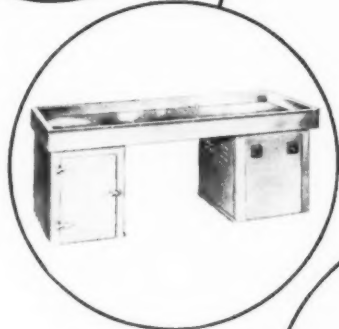
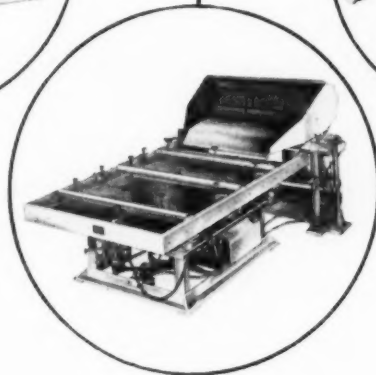


PLATE
GRAINING
MACHINES



SPECIALIZED
EQUIPMENT
DEVELOPED



LAYOUT
STRIPPING
TABLES

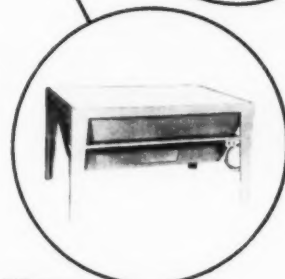


PLATE
WHIRLERS



QUALITY PRODUCTS

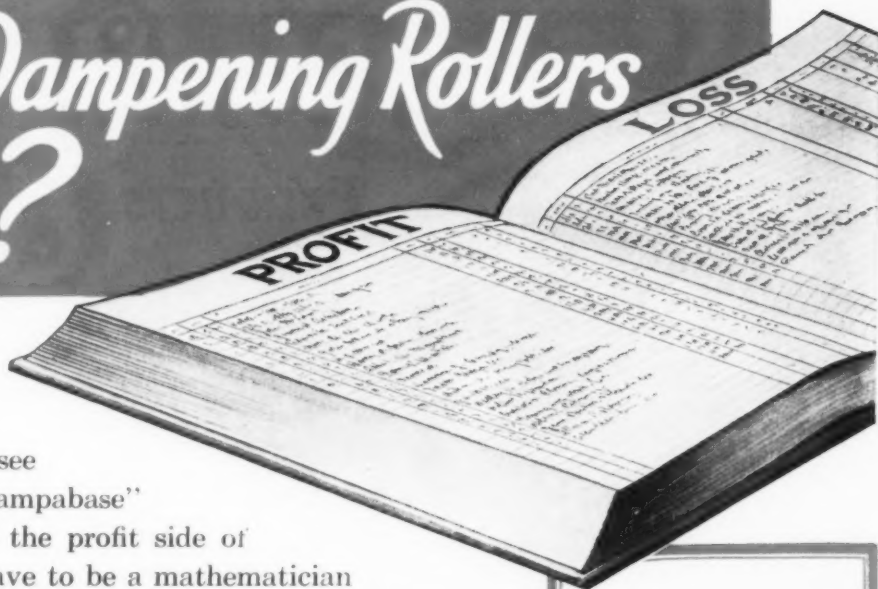
EARLY DELIVERY

ZARKIN MACHINE CO., INC.

335 E. 27th St., New York 16, N. Y.

Phone LExington 2-0052

Will your Dampening Rollers decide?



It's simple arithmetic to see how "Aquatex" and "Dampabase" will add more dollars to the profit side of your ledger. You don't have to be a mathematician to see the benefits due to the elimination of ghosts, wrinkles, streaks, fuzz and lint. You reduce operation costs because the scientifically tested texture of these fabrics gives you exacting dampening control so necessary to steady efficient reproduction. Add to these advantages, the saving in man-hours by using the exclusive Godfrey "Quik-on" tube when covering your rollers with...

AQUATEX DAMPABASE
TRADE MARK REG. U.S. PAT. OFF.

"Aquatex" and "Dampabase" are used throughout the world. The efficiency and economy associated with these fabrics, are money-saving benefits, and you can have them for the asking. Remember—you get exacting dampening control, take less time in covering your dampening rollers, and have steady uninterrupted press operation and reproduction with these two proven dampening quality roller coverings.

A Size for Every Press

GODFREY ROLLER COMPANY

211-17 NORTH CAMAC STREET, PHILADELPHIA 7, PA.

Roller Makers for 82 Years • WILLIAM P. SQUIBB, President

They're Better because They're Seamless

7

ADVANTAGES

- .. Easy To Put On
(“Quik-on” Tube)
- .. Dampening Control
- .. Less Wear On Your Plates
- .. Uniform Thickness and Snugness
- .. Lasts Longer
- .. No Creeps or Uneven Surfaces
- .. They're Seamless



Colorvision...

There is no substitute for color. Monochrome has its virtues but there is no comparison to actual color display. Alert merchandisers have discovered this simple fact and with the use of color increasing in magazines, advertisers are now aware of the power of color. To the Graphic Arts, color, in relation to its effect on vision with subsequent results on sales, means more telling impressions and greater printing profits. To S & V it means more opportunity to provide brilliant colors from "service-conscious" branches all over the country.

Sinclair and Valentine Co.

Main Office and Factory: 611 West 129th Street, New York 27, N.Y.

Albany	Boston	Cleveland	Detroit	Kalamazoo	Manila	New Haven	Philadelphia
Baltimore	Charlotte	Dallas	Havana	Kansas City	Mexico City	New Orleans	San Francisco
Birmingham	Chicago	Dayton	Jacksonville	Los Angeles	Miami	Nashville	Seattle

S E R V I C E F R O M C O A S T T O C O A S T

AUTHORITATIVE LITHO BOOKS

Some very interesting and instructive books have been published by the Lithographic Technical Foundation in recent months. There is now enough material available to cover apprentice training in five major crafts and several executive functions of lithography. These books are of educational value to anyone in the business and are indispensable to training programs.

If your library is incomplete, look at the list below for books you do not have. If you wish to inspect some of these books before purchasing them, ask to see them at your public library. All libraries do not have the latest publications but probably will procure them if requested to do so.

SKILLED CRAFT TEXTS

No. 501	Offset Press Troubles	\$.75	508	Offset Photography (Halftone) .....	.75
502	Offset Platemaking (Albumin) .....	.75	509	Offset Photography (Color Separation) ..	.75
503	Offset Photography (Line) .....	.75	510	Tone & Color Correcting for Offset (Dot Etching) ..	.75
504	Offset Platemaking (Deep Etch Gum Process) .....	.75	511	Tone & Color Correcting for Offset (Hand Retouching) ..	.75
505	Lithographic Offset Press Operation, Volume I .....	.75	513	Press Technical for Offset Lithography .....	.75
506	Lithographic Offset Press Operating, Volume II .....	.75	514	Tone & Color Correcting for Offset (Opauing) ....	.75
507	Offset Stripping (Black and White) .....	.75			

SPECIAL SUBJECT TEXTS

No. 403	Chemistry for Lithographers I	\$1.00	410	Estimating (Black and White)	1.00
404	Chemistry for Lithographers II	1.00	411	Estimating (Color)	1.00
407	Survey of Lithography	1.00	413	Leadership Training	1.00

SHOP MANUALS

No. 101	No. 1	Paper and Humidity in the Pressroom	\$.25	114	No. 14	Packing and Pressures for Offset Presses ....	.25
102	No. 2	Dot Etching .....	.25	115	No. 15	Press Cylinders for Offset Lithography .....	.25
103	No. 3	Albumin Platemaking .....	.25	116	No. 16	Offset Photography (Color Separation) .....	.25
104	No. 4	pH Control of Fountain Solutions .....	.25	117	No. 17	Hand Transfers for Offset Lithography .....	.25
105	No. 5	Inking System for the Offset Press .....	.25	118	No. 18	Press Troubles for Offset Lithography .....	.25
106	No. 6	Lithographic Offset Press Blankets .....	.25	119	No. 19	Gauges and Instruments for Offset .....	.25
107	No. 7	Feeder and Delivery for Offset Presses .....	.25	120	No. 20	Photo-Composing for Offset Lithography ....	.25
108	No. 8	The Dampening System of Offset Press .....	.25	122	No. 22	Proving for Offset Lithography .....	.25
109	No. 9	Guides, Grippers and Insertion Devices .....	.25	123	No. 23	Platemaking for Offset (Deep Etch) .....	.25
110	No. 10	Graining of Lithographic Plates .....	.25	124	No. 24	Offset Photography (Halftone) .....	.25
111	No. 11	Offset Plates in the Pressroom .....	.25	125	No. 25	Paper for Offset Lithography .....	.25
112	No. 12	Offset Photography (Line) .....	.25	126	No. 26	Paper Conditioning for Offset Lithography ..	.25
113	No. 13	Inks for Offset Lithography .....	.25				

RESEARCH BULLETINS, TECHNICAL BULLETINS, TECHNICAL PAPERS AND PUBLICATIONS

No. 204	The Light Fastness of Lithographic Ink Pigments.....	\$1.00	214	Improvements in Deep-etch Platemaking	1.00
205	Tackiness, Glazing and Engraving of Offset Press Blankets	1.00	301	Modern Paper Conditioning Methods and Paper Hygroscope	1.00
206	The Albumin Process of Photolithography	1.00	302	The Inkometer, an Instrument for Measuring the Con- sistency of Lithographic and Printing Inks	N/C
207	Lithotine, A New Lithographic Solvent	1.00	303	Method of Conditioning Paper for Multi-color Offset ..	1.00
208	Processes for Making Deep-etched Zinc Lithographic Plates by Photo and Hand Transfer Methods	1.00	304	Optical Density as a Measure of Tone Value in Lithography	1.00
209	Deep-etched Aluminum and Zinc Lithographic Plates by the Gum Process	1.00	305	The Relations Between Dot Area, Dot Density and Tone Value for Halftone Images	1.00
210	Deep-etched Lithographic Plates Directly from Negatives	1.00	1532	Further Experimental Study of Beater Practice in the Manufacture of Offset Papers .....	.05
211	Dot-etching on Dry Plates and Films	1.00		The Paper Hygroscope	N/C
212	Litho-kleen, An Improved Cleaner and Preservative for Offset Blankets and Rollers	1.00		The Register Rule	N/C
213	The Drying of Lithographic Ink	1.00			50% discount to members

Send Check or Money Order with Your Order

LITHOGRAPHIC TECHNICAL FOUNDATION
131 EAST 39th ST. **NEW YORK 16, N. Y.**

Cōmōlith

the new type of litho ink . . .

Cōmōlith will do these two things in your pressroom:

1. it will work better on the press.

Cōmōlith has been scientifically formulated for exceptional plate and press life . . . to have high resistance to dispersion in water and to retard skinning to an unusual degree. It doesn't require pampering. Just ink up the press and let her roll.

2. it will run sharp for miles and miles.

Put Cōmōlith to the test on your finest halftone work. Look at the density of the solids . . . the sharp, clear middletones and the clean highlights. You'll agree that this is ink performance at its best.



WHEN THIS LABEL IS ON THE
CAN . . . YOU DON'T GAMBLE



C. O. MONK, INC., 1621 GUILFORD AVE., BALTIMORE 2, MD.

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Dear Reader:

Since this letter appears in a magazine, we cannot address it personally to you.

Nevertheless, it is addressed particularly to you -- if, through your high regard for business correspondence, you know that only excellence in letter-heads will suffice.

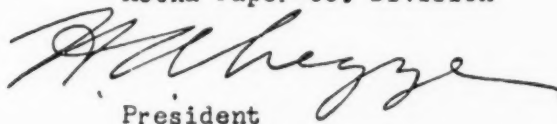
This being true, it is altogether likely that you are a user of Correct Bond. So, on the occasion of our company's Golden Anniversary, I'd like to express our thanks -- and tender a promise.

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Sincerely,

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Aetna Paper Co. Division


President

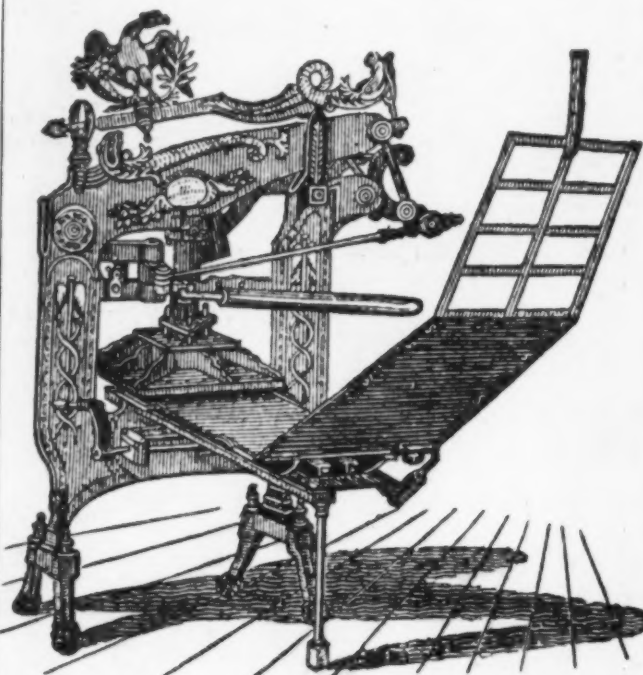
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**rollers helped printers
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"The labor of working one of the old screw presses is equal to that of the ploughman in the field," commented an early writer. But George Clymer of Philadelphia lessened the toil by inventing the first American "hand press" which substituted a system of levers for the screw.

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The Washington press

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Today, linking a century of experience with modern technology, SAM'L BINGHAM'S SON MFG. CO. is depended upon for "the right roller right away," serving the printing industry through 16 conveniently located factories.

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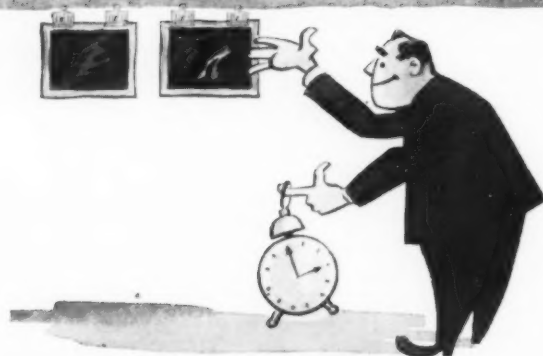


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But it couldn't be any worse than the annoyance a printer has on his hands when he tries to run a paper whose moisture content has been left to shift for itself.

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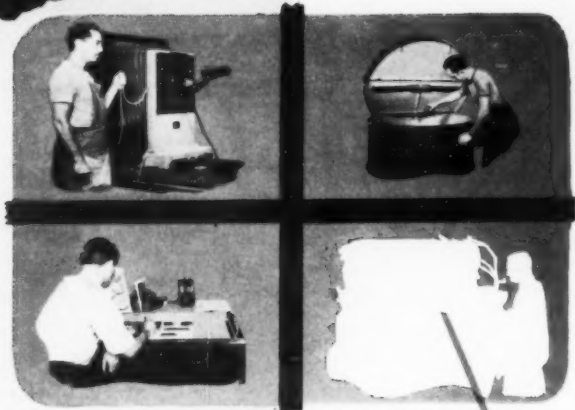
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EDITORIALS

SECRETS . . . hush, hush formulas . . . mysterious processes . . . occult methods . . . plants padlocked against visitors . . . even today you can still find these throwbacks to past decades in the lithographic industry. In recent years industry cooperative research has developed a great number of improved methods, and complete information has been widely published. Lithographic methods are moving toward standardization as better ways of doing things are discovered, published, tested and approved.

Yet in the face of these facts are the anachronisms of a few lithographic plants guarding with jealousy what they believe to be secret ways of doing things. They oppose the idea of their men attending any trade meeting where one of their secrets might be revealed. They look with suspicion on visitors to their shops.

We have taken some interest in this situation and have talked with a good many technical representatives and trouble shooters who are in a position to compare some of these plants with others. Without revealing any secrets, these men, and they are qualified observers, report that as a general rule the secretive plants actually have little to hide except their lack of progress. In most cases their wall of secrecy proves to be like the Great Wall of China—it keeps their secrets *in* but at the same time it keeps fresh ideas *out*. The result is that the secretive plants are usually far behind in their methods of turning out lithography.

Of course there are situations where it would be folly to throw open your doors to all who would examine your shop. Obviously there are specialized lithographing plants which have developed their own methods of dealing with special problems. There are others which maintain large research projects of their own and at their own expense. These are the progressive firms which are no doubt in the lead in technology.

But the old time secrecy is typified in the shop by the old craftsman who refuses to teach an apprentice anything. In the general industry it is evidenced by the management which is

afraid its competitors might get wind of whether its presses face north or south.

Lithography, like most any other industry you can name, grows by ideas. That's where each new development begins, and it is through an exchange of ideas that they multiply.

Fortunately the secretive shops are in a shrinking minority. Chances are they are out of reach of this editorial, anyway, as they no doubt disapprove of trade magazines.



THE problem of credit is one with which the average lithographer has not been bothered in quite some time. In fact, it has been so long that many firms may have been lulled into a false sense of security. During the past five or more years lithographers have been occupied mainly with the job of finding enough paper and skilled help to keep their plants operating. Because of the large available volume clamoring to get onto the presses, and the abundance of money available in the marketplace, credit has been a somewhat minor consideration. As a result a state of mind may have developed that could have serious consequences unless it undergoes reconversion.

The lithographer should bring himself to realize that, notwithstanding conditions of the past five years or so, the current situation is bound to change—in fact it is already showing the first symptoms of change. There is increasing evidence of this: chattel mortgages are on the increase, certain types of goods (furs, radios, certain chemicals, etc.) are coming back into the market and are already meeting with slackening demand. As this begins to happen on an ever-widening basis, we can expect the other normal characteristics of our economic structure to reappear.

Records should be watched with more and more care and credit should be extended or shortened accordingly.



TONE and COLOR CONTROL

The quality of offset prints lies in their tone and color values. Color values in halftone prints consist of tone values in the various ink colors. The control of tones, therefore, is the most important problem in offset lithographic reproduction

By **PAUL W. DORST**

Lithographic Technical Foundation

LITHOGRAPHERS doing high-quality color work sometimes have difficulty in obtaining the desired tones and color values and in maintaining them throughout a run. It is not possible to control the prints with absolute perfection at the present time, but the situation can often be improved to a marked extent by making active use of available information. Much of this information is general knowledge among lithographic craftsmen; yet it is seldom used to the fullest extent.

Variation in the printed tones and colors is undesirable, first because the customer doesn't want it. The buyer of lithography wants a quantity of prints which look alike, and which look as much like the original copy as possible. If he approves a proof, he wants every single press print to look exactly like it.

Variation is also undesirable from the lithographer's point of view, because it increases the uncertainty in obtaining the desired tones and colors at the start of a run. It lowers efficiency and increases the cost of production when a high standard of quality must be maintained.

The basic principles involved in turning out color work of high quality apply also to black-and-white work. In any case, precision is desirable in locating the ink on the paper, and usually the maximum strength of the printed ink is desired. In color process work, the halftone dots must be printed in precisely the required sizes and shapes, and the printed ink strength must be kept constant, in order to maintain uniform quality. The same is true in black-and-white halftones. In line work the same precision and constant ink strength are desirable in any type serifs or fine lines.

Meaning of Tone

The word *tone* has different meanings to different individuals. It should not be used, therefore, without an explanation of the meaning intended. In the present discussion, we shall use it to refer to the different "values" of any single ink that may be printed in halftone. Thus a halftone gray scale printed in black ink has various *tones* of black, the same scale printed in red ink has various *tones* of red. In this sense, then, the control

of print quality resolves itself principally into the control of printed *tones*, whether one or more ink colors are involved.

Color process work is probably the most demanding of any type of work done by offset lithography. Usually the lithographer employs a set of color inks, which are more or less standardized, and does his best to print all the desired colors with these inks. In special cases these selected inks may be modified in color, or others may be substituted, in order to improve the results. In some cases the ink colors are modified to compensate for errors in color correction or for imperfect control in platemaking or in printing on the press. More effective control of printed tones would, of course, eliminate these latter reasons for modifying ink colors.

There is usually little difficulty in choosing the ink colors from those available. Craftsmen generally do this well. The principal problems, however, lie in obtaining the necessary dot sizes in all parts of the print, and once they are obtained, in maintaining the original dot sizes and ink strength throughout the run.

Not many years ago scum and blind plates were serious troubles in lithographic shops. Today these troubles, while still bothersome at times, are not so prevalent. The improvement in this situation is probably due in large part to the development of deep-etch plates and to better knowledge of albumin plates and of press conditions. Improved inks and papers have contributed their part also. But with the minimizing of scum and blind plate images, other difficulties in tone control are becoming apparent.

Variation in Tones

Many lithographers are turning their attention toward the elimination of variation in printed tones, with the full realization that this should lead to better efficiency and quality. They realize that more effective tone control is desirable, and should be possible.

Control of printed tones is a large part of quality control in offset lithography. It means control of the one product of the lithographic industry, which is printed tones, as we have defined it earlier. It includes the best possible matching of the colors of the original copy, as seen by the eye, and maintaining them throughout a run. In a sense, all problems in lithography represent nothing more than various phases in tone control.

Lithographers are not alone in having tone control problems, of course. Letterpress and gravure printers have them, although the factors involved and the means of handling them are somewhat different. The control of tones is basic in any graphic arts process. Craftsmanship is, and probably always will be, a requirement in

every operation, but craftsmanship can be made more effective by technical developments and by proper coordination between operations.

In lithography, factors concerned with tone control occur in every operation, no matter what working method or combination of methods is used. For the most effective control we need to understand these factors and their relative effects. We need to control the individual factors to the necessary degree. Through such an analysis and control of important factors, we can gain more complete control of print quality.

Coordination of Departments

As in other industries engaged in mass production, coordination between the different lithographic operations is necessary to obtain the desired quality in the finished product. Coordination involves more than mere scheduling of production. The quality of the work done in each operation must be proper for the next. A screen positive must be so made that it will produce a good plate. And the plate must have certain qualities to produce acceptable press prints. In other words, the various departments in a shop must be coordinated with respect to quality of the work.

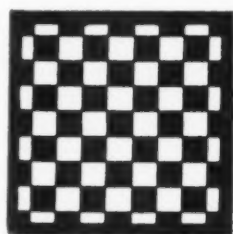
All shops operating successfully are coordinated at least to some extent. Otherwise none of the work would be acceptable. But that does not mean that the coordination could not be improved. There should be a certain overall plan. A logical plan might be developed as follows, by examining the process as a whole.

The photographer is supposed to

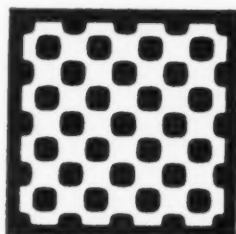
know, from an inspection of the copy, what tones are required on each negative or positive to give an acceptable press print. The available photographic materials and methods cannot always produce the tone relationships necessary in the later operations, however, and an artist is expected to correct locally, where necessary, the various tones the photographer obtains. From the corrected negative or positive, a press plate is made, possibly with one or more intermediate photographic steps, which is expected to print the desired tones on the press.

This overall plan is fundamentally sound. But it involves certain requirements. If the photographer and the artist are to know the tone values required, consistent results must be obtained in every operation following tone correction. If variations occur from job to job in plate making and press work, the photographer and the artist cannot predict the result and hence cannot turn out the best possible work, except by chance. As one example, if a half dot on a screen positive produces a $\frac{5}{8}$ dot on one plate and a $\frac{3}{8}$ dot on the next one, the artist does not know what size dot is necessary on the positive to produce a half dot on a third plate. The overall efficiency in production depends, in part, on how well the operations after tone correction are *standardized*, with respect to tones.

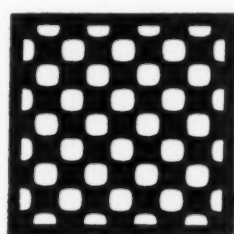
The next requirement for efficient production is that the photographer and the artist really know what tones are required on each negative or positive, when consistent results are obtained. While experience and memory can be useful in this connection, more accurate results can be expected by providing the photographer or the artist, or both, with systematic, properly made records. For color work, these records consist of color charts. To be of maximum usefulness, such charts should indicate the tones required on each negative or positive. In order to meet this requirement, they must be made by the same method and under precisely the same conditions as are used in production. The ink colors must, of course, be the same, and the charts must be printed



If dots that look like this on a positive ...



produce dots like this on one plate ...



and dots like this on another ...

... then the artist cannot know what size dots are required on a positive to print the desired tones on the press.

on the same type of paper. Most existing color charts do not meet all these requirements, and therefore have only limited value in the present plan.

Proving, of course, is intended to show before a job goes to press how the finished job will look. Proving consists in completing the operations which follow color correction. It is a test to see whether any further color correction is desirable. If the proof prints are really to serve their intended purpose, it is necessary to fix the conditions under which the proof is made so that precisely the same result is obtained as in actual production. This means that the operations following color correction for the purpose of making a proof must be standardized just as they are in production.

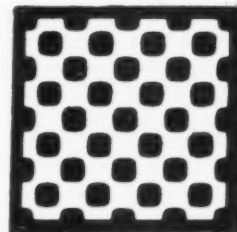
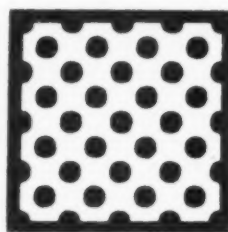
Thus it can be seen that standardization of the operations after color correction, so that consistent results are obtained, is desirable in order to obtain efficient production and uniform quality. These operations always include plate making and printing on the press, and may include one or more photographic steps. Later we will discuss the factors involved in this standardization.

The plan just outlined is probably intended in most shops today, although it often seems that little attention is paid to it. In plate making, for example, wide variations in dot size on the plate from a given dot size on a negative or positive, are sometimes tolerated. Such variations usually can be reduced without great difficulty by tracing the cause and doing something about it. Other variations are not so easily reduced.

It is wise to formulate such a plan as has just been described, and to make every attempt to control each operation so that it fits properly into the plan. The entire lithographic process must be kept in mind in setting up the controls. In order to set up the proper controls we must look into the various factors that affect printed tones.

At any point in a black-and-white halftone print the visual tone is determined by two things: (1) the pro-

These two tones look different because the dot sizes, (or dot areas) are different. View them from a distance or with half-closed eyes.



portion of the total area covered by printed ink, which we will call *dot area**; and (2) the "strength" of the printed ink, which we will call *dot density*.* In color work these same factors determine the visual tone, but for the sake of simplicity we will confine ourselves here to black-and-white work.

If we want to print a certain tone value, we must know either the dot density or the dot area before the other can be found. Usually the dot density, which is determined largely by the characteristics of the paper and the ink, is given, and the dot area is adjusted to produce the desired tone. As a general rule the differences between the various tones on a print are of greater importance than the actual tone values.

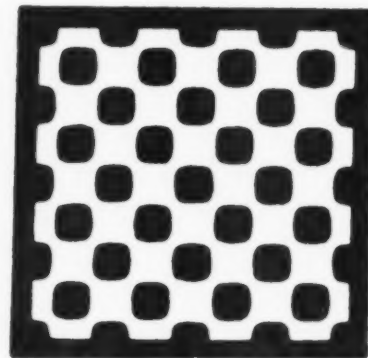
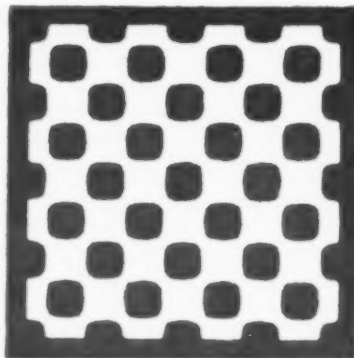
If we print a given tone, and then change either the dot area or the dot density and make another print, the

new tone will be different. Increase the dot area, and the tone darkens. Darken the ink, and the tone darkens. But if we print a series of different tones, as in a reproduction of a picture, and then change either the dot area or the dot intensity uniformly over all tones, *we do not get a uniform change in the visual value of all tones*. This is very important to know. If the dot area is changed uniformly, the shadow tones are changed to a much greater degree than the highlights. The same is true of a change in dot density. The result, therefore, is that contrast in the shadows is changed much more than in the highlights, and detail in these tones is altered in the same way.

Moreover, if the dot density should be changed, the resulting changes in all tones cannot be compensated by an overall change in dot area, without disturbing the relationships between the various tones.

If a desired relationship is to be obtained between the tones on a halftone print and those on the copy, the sizes of the dots at all points on the print must be proper for the dot dens-

* The terms *dot area* and *dot density* are used in Technical Bulletin No. 6. "The Relations between Dot Area, Dot Density, and Tone Value", published by the Lithographic Technical Foundation, Inc., 131 East 39th St. New York 16, N. Y. Further explanations of these terms, and their relations to visual tone value will be found in this bulletin.



These two tones look different because the dot densities are different. The dot areas are the same.

ity. And once these two conditions are obtained, they must be kept the same on all prints if the quality is to be uniform.

These facts about dot area, dot density, and visual tone mean that effective tone control can be achieved only by controlling both dot area and dot density on the press prints. All the conditions that have any effect on dot area or dot density must therefore be controlled.

Factors Affecting Dot Density

A most important factor affecting dot density is the smoothness of the surface onto which the ink is printed. The surface of the printed ink is usually glossy and reflects some of the light that falls on it as if it were a mirror. The film of ink, being thin, follows any undulation in the paper surface. On a relatively rough paper such as M.F., some of the light reflected by the ink surface reaches the eye, no matter from what direction the light falls on it.

When the ink is printed onto a smooth sheet, such as coated paper, however, the ink surface is more nearly smooth and any light reflected by it usually goes off in some direction other than toward the eye. Thus the eye sees no reflected light, and the printed ink appears to be stronger than on the M.F. sheet. Densitometer measurements show this difference. Other things being equal, therefore, the dot density is greater on coated paper than on M.F.

The greater snap and brilliance of

letterpress prints on coated stock, as compared with offset prints on M.F. paper has sometimes been attributed to the differences between the two printing processes. Measurements of reflection density on a large number of prints by both processes have indicated, however, that the character of the paper surfaces has a greater effect on the apparent strength of the printed ink than the nature of the process. Exceptions do occur, of course, when press conditions are not correct.

Since the paper surface is so important a factor in determining dot density, the artist who corrects tones or colors should always know what kind of paper will be used for a job. Color charts should be made on each type of paper used in a plant, for this reason also. The differences due to paper surface will be apparent on such charts. Paper surface is usually quite consistent, and once the type is selected, the lithographer has no problem in controlling it.

A troublesome factor in maintaining consistent dot density in offset lithography is the water used on the press. When too much water is fed to the plate, the strength of the printed ink is reduced—that is, the dot density is reduced. With a light form it is difficult to feed so little water that the dot density is not noticeably reduced, and yet to keep the non-printing areas from catching up.

Effects of Ink

It is not known precisely how the water reduces the density of the

printed ink, but it is known that the water is worked into the ink and that the printed ink contains water. The amount of water in the ink depends on press conditions and on the nature of the ink. The ink may contain up to 25 or 30 per cent of water. A minimum amount of water in the ink is necessary to obtain maximum dot density. Some inks seem to be affected less by water than others.

The control of water on offset presses today, despite many ingenious attempts at improvements, is not precise enough to permit using the absolute minimum amount of water on the plate. The amount varies to a certain extent without any change in the water-feed adjustment. And so to avoid occasional catching-up, the average amount fed must be kept high enough so that the actual amount on the plate never falls below the minimum necessary to keep the plate clean.

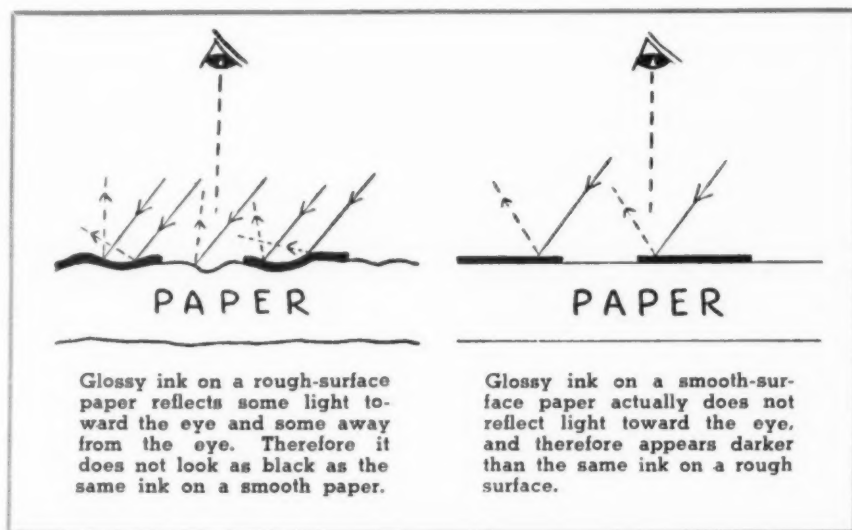
Water control is admittedly difficult on existing presses, and for this reason it is difficult for the pressman to maintain consistent dot density on the press sheets. Until the water control is improved or until the effects are minimized by some advance in ink formulation or other development, it is up to the pressman to use as little water as he can. Expert pressmanship can thus reduce the effect of this variable factor.

Effect of Water

The amount of ink printed can also affect dot density. Too little ink results in reduced dot density, because the paper is not sufficiently covered. Beyond a certain point, an increase in ink has no further effect. But too much ink will increase the dot area and thus distort the tone relations. Various inks differ somewhat in the dot density they produce under the best conditions.

Pressures between plate and blanket, and between blanket and paper, also affect dot density. These pressures must fall within certain limits, in order to print uniformly inked dots without too much increase in size.

Given satisfactory plates, from the standpoint of freedom from scum and blind images, the dot density on the



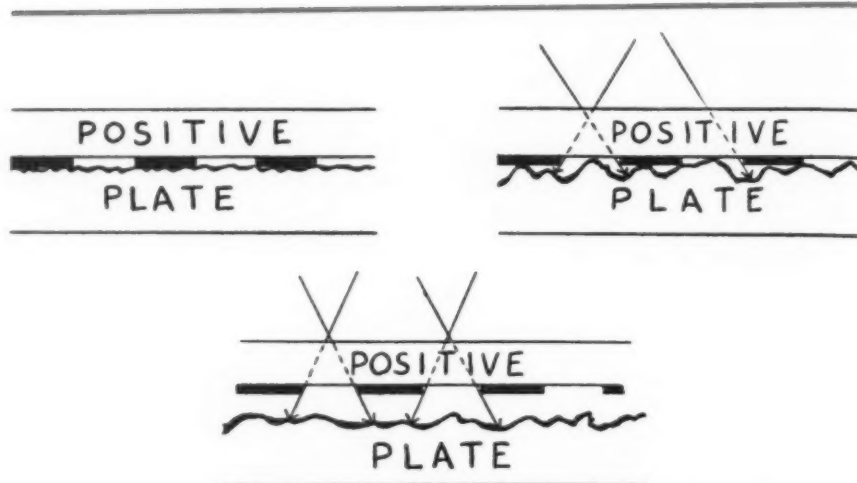
printed sheets is entirely in the hands of the pressman. Dot area is partly in his hands. Consistency is desirable in dot density, and in the relation between dot areas on the print and on the plate. Control of press conditions is not easy. But if the entire process can be so systematized and so controlled that the pressman can concentrate on printing the most desirable dots, and if the tone correction is done so that the printed sheets are acceptable under these conditions, a marked advance will have been made.

Factors Affecting Dot Area

Factors affecting the consistency of dot sizes on the press sheets occur in practically all lithographic operations. The general effects of exposure and closeness of contact in plate making, and of improper amounts of water and ink, and incorrect pressures on the press, are well known. But there are other factors, the importance of some of which may not be realized.

In the interest of consistent tone values, the screen negative or positive from which the plate is made should have dots as sharp and opaque as possible; the grain on the plate should be as shallow as possible; the light-sensitive plate coating should be as thin as possible; and the plate coating should be in perfect contact with the negative or positive during exposure. If we had such ideal conditions, the dots on the finished plate would have the same size as those on the negative or positive, and the dot size would not vary with exposure. But in practice we do not have these ideal conditions. We must make compromises with other requirements. But the closer we approach to these conditions, the easier it becomes to obtain consistent relations between negative or positive dots and plate dots.

A certain amount of halo, or soft edge, always exists around each dot on a screen negative or positive. Contact images usually have a narrower halo, or a sharper edge, around the dots than those made through a halftone screen of any kind. By choice of emulsion, and exposure and development conditions, it is sometimes possible to improve on the sharpness



Top, left: A very thin coating on a very fine grain would produce dots of the same size as those on a positive if the positive dots were sharp. Top, right: The relatively rough grain and uneven coatings that must be used permit some undercutting by the exposing light, and do not usually produce dots of the same size as those on the positive. Lower: Imperfect contact between plate and positive during exposure permits more undercutting than is desirable.

of dots. Perfectly sharp edges must not be expected, however, if good tone relations are obtained. Proper tone separation in the highlights demands a low gradient in light intensity at the edge of each dot during exposure, which contributes to soft edges.

Sharpness of the dots in screen images made through a halftone screen can be affected by the nature of the continuous-tone image. If, for example, two screen positives are to be made with the same degree of contrast from two different continuous-tone negatives, one flat and the other contrasty, the dots on the two positives will differ in sharpness. The positive made from the contrasty negative will have the sharper dots. Hence, within reason, the more contrasty continuous-tone negative is the more desirable.

Sharpness of the dots is usually increased by reduction with a "cutting" reducer, such as hypo-ferricyanide or cyanide-iodine. That is why some photographers have made it a general practice to give a flat reduction to all screen images made through a screen. Dot-etching sharpens the dots in the same way.

Even if we had perfectly sharp dots on the screen image, the advantages could be lost in plate making by poor contact during exposure. Spacing between the negative or positive allows

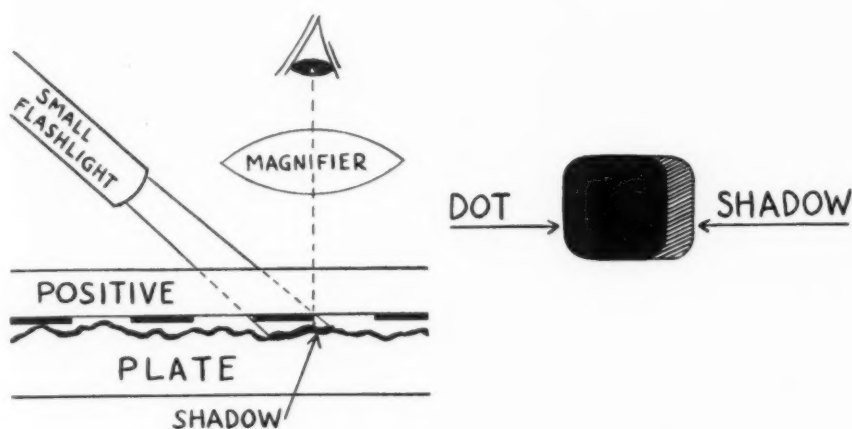
the light to undercut the opaque dots, just as if they had soft edges. The amount of undercutting depends on the angular spread of the light at the emulsion surface, the spacing, the hardening of the coating obtained by exposure, and the development conditions.

Effect of Plate Grain

The plate grain itself prevents perfect contact during exposure. The plate coating is thin over the grain peaks and thicker in the valleys, and yet the top surface of the coating is not glass smooth. Deep-etch coatings usually are more nearly smooth than albumin coatings. Thus perfect contact is not possible at the edges of each dot, as would be desirable and a certain amount of undercutting must be tolerated.

In making either albumin or deep-etch plates it is advisable to keep the grain as consistent as possible, so that the amount of undercutting will be consistent. This may be done practically by rigid control of the graining procedure. It is also important to use the same coating formula at all times, to coat with precisely the same technique, and to keep the whirler speed constant. Thus the closeness of contact during exposure can be kept fairly consistent, even if it cannot be made perfect.

It often happens in practice, how-



Left: A method of inspection to discover poor contact. A small flashlight held at an angle, as shown, will cause the dots on the positive to cast shadows on the plate. The width of the shadow (right) is a measure of the spacing between positive and plate.

ever, that the contact is worse than is necessary. Poor contact may be caused by insufficient vacuum, by dents in the plate, by masking material between the transparency and the plate, or by large particles of dust or dirt. The various parts of a photo-composing machine may get out of adjustment, or the soft rubber gaskets around the chase may be in poor condition and thus permit air leaks which reduce the vacuum. The indication on the vacuum gauge is *not* a reliable indication that good contact is obtained. Vacuum frames usually give better contact than photo-composing machines, although not always.

How to Check Contact

The only way of being certain of good contact is to check the contact itself. This may be done satisfactorily in a very simple way. A small "penlight" flashlight is held near the surface of the negative or positive at an angle of about 45 degrees, and a small magnifier, magnifying at least 10 times, is used to inspect for any shadows cast by the dots on the plate surface. Any other light may be used, so long as it is small or is held far enough away to cast sharp shadows. After a little experience, one can thus judge whether the contact is as good as can be expected. With good contact, no shadows, or at least very narrow ones, will be seen. The cause of

poor contact usually can be traced and remedied. Consistent plate making, from the standpoint of dot sizes, demands uniform contact over all parts of all images.

Since screen negatives and positives have at least some halo around the dots, and since less than perfect contact must be accepted, we must tolerate a certain amount of undercutting. In some cases, the variation in dot sizes on the press sheets caused by these imperfect conditions may be acceptable without any special precautions. But if the variation is too great, we can control exposure and development. With fine screens, the importance of doing this is greater, because the relative variation in dot size is greater.

How to Check Exposure

A practical way of determining the importance of controlling exposure and development is to select a representative negative or positive, and to make a series of exposures from it on a single plate. It is wise to make the first exposure too short to give a good image, and to increase each subsequent exposure by 50 per cent. Such a series of exposures might be, for example, 1 minute, 1½ minutes, 2¼ minutes and so on. In this way a wide range of exposures is covered and more nearly equal differences in the effect of the various exposures is

obtained. The plate is then finished, care being taken to give uniform treatment to all portions of the plate, and the different images are examined. Or still better, the test plate is put on a press and impressions are pulled for examination. A decision can then be made as to the best exposure, and also as to the accuracy with which exposure should be controlled.

For the most consistent results, and especially with screens finer than 150-line, the exposure should be adjusted in accordance with relative humidity. If the relative humidity in the plate department is held constant within plus or minus 3 per cent by air-conditioning, no adjustment in exposure is necessary. The effect of relative humidity can be judged from a test plate made as just described. The difference in exposure effect produced by a change in relative humidity from 30 to 60 per cent, with constant exposure time is equivalent to doubling the exposure time.

Effect of Development

Development conditions can also be a factor in obtaining consistent tone values. If exposure causes appreciable difference in plate dot sizes, it is a safe bet that the extent of development will also have an appreciable effect, especially with deep-etch plates. A practical test can be made by making a series of duplicate exposures on the same plate, all with the same exposure time, and developing them for different lengths of time. With albumin plates, the difference should not be noticeable, but the use of sodium bicarbonate or ammonia may give dots of different size than plain water.

On deep-etch plates the developer first removes only those parts of the coating which received no exposure whatever. Continued action then removes more and more of the coating at the dot edges where undercutting or soft edges have produced a region of gradually increasing hardness. Extreme development can remove the coating out to the extreme edges of each dot and thus yield printing dots of essentially the same size as the opaque dots on the positive. The

range in dot sizes thus produced depends on the softness at the edges of the dots and on the degree of contact, among other factors, and thus cannot be predicted in individual cases. Full development usually gives more consistent results than minimum development.

A comparison can be made on the finished deep-etch plate by placing the positive over the plate image in approximate register, and examining the relative dot sizes with a magnifier. This is easily done in areas having dots smaller than a half dot.

The time required for full development varies with the length of time elapsed with the drying of the coating and its development, with the temperature, and with the degree of agitation of the developer. The effect of temperature differs somewhat between different developers. For these reasons it is best not to develop for a specified time, but rather for a total time depending on the time required for general frothing on each plate. Constant temperature in the plate department, as can be obtained with effective air-conditioning, removes one of the variable factors in deep-etch plate making.

Proper attention to each of these factors that affect dot size can lead to greater consistency in plate making than is often realized. The extent to which this attention must be carried can only be decided in individual cases.

Press Conditions

Press conditions also influence dot sizes on the press sheets. Control of these conditions is somewhat more difficult than those in plate making, but ideally consistent conditions can be approached. There must be no slur nor drag on the printed dots. This means that the press must be in good mechanical condition, and all rollers and pressures must be properly adjusted. The amount of ink printed must fall within fairly narrow limits. Too little ink will result in reduced dot density, while too much will cause undue squashing and increases in dot areas.

On the press, as on the plate, it is not necessary to print dots of ex-

Life Uses Offset

Life magazine turned to offset lithography for the production of a four-color, four-page form in its February 24 issue, and was "well pleased" with the results, that magazine's production department reports. The form was lithographed by Forbes Lithograph Mfg. Co., Chelsea, Mass., and the work was reproduced from original Kodachromes. The run was said to be 5,500,000. The job was run on two 4-color sheet fed presses. The form consisted of reproductions of cave paintings.

actly the same size as those on the screen negative or positive, but it is important to keep any difference in size as nearly consistent as possible at all times. Dots on a positive and on a press sheet may be compared in size by placing the positive over the sheet in approximate register with the printed image, and examining with a magnifier.

Summary

The quality of offset prints lies in their tone and color values. Color values in halftone prints consist of tone values in the various ink colors. The control of tones therefore, is the most important problem in offset lithography. Effective control of printed tones is necessary to obtain the maximum similarity between the prints and the copy, and also between the individual prints.

Responsibility for printed tones should be placed on the shoulders of the correction artist, who is best equipped by his talent and training to accept this responsibility. To do this effectively, however, consistent results must be obtained in the subsequent operations, and the artist must be provided with useful records of these results. Properly made color charts can provide these records.

Consistent results in the operations after tone correction require the greatest possible standardization in each of these operations, with respect

to tone values. Perfect standardization is not possible at the present time, but can be approached by making every attempt to control all the factors that affect dot area (or dot size) and dot density (or the "strength" of the printed ink).

Many of these factors are known, but in general too little attention has been paid to them. The extent to which control is necessary must be decided in individual cases. Decisions can be made on the basis of rather simple tests.

The problem of controlling tone values and thus obtaining the best possible quality in offset prints needs further research into factors not well understood and into the relative effects of those partly understood at the present time. The Research Laboratory of the Lithographic Technical Foundation, under the supervision of the Armour Research Foundation in Chicago, will study some of these problems during 1947 as part of the project on tone reproduction. This work will be coordinated with earlier research of the LTF Research Laboratory, all of which is part of a long-term project intended to improve the efficiency and the reliability of the lithographic process.

In fact, most of the research of the Lithographic Technical Foundation is aimed toward the improvement in rendering of tone values. There are indications, at present, that the greatest value of our recent work on cellulose gum and Cronak lies in the ability of these processes, when properly coordinated and carried out, to maintain constant tone values in printing. Much of the variation in tone values experienced in printing on the press is due to improper desensitization of the plates. Improved desensitization as afforded by the use of cellulose gum and Cronak (on zinc) will help to eliminate this troublesome variation.

It is hoped that the results of this research will provide the lithographer with definite, detailed information on control of printed tones and colors—information that will remove the necessity for each shop working out its own best conditions, as must be done at present.★★

The CONCENTRATED ARC

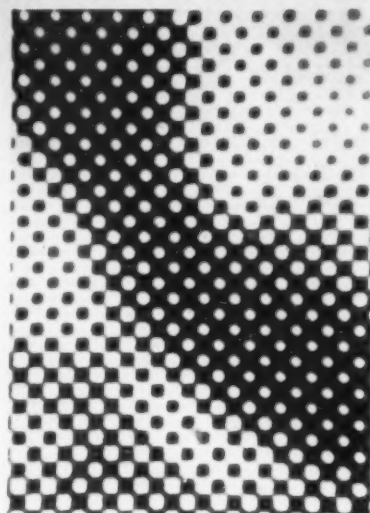
A practical photomechanical application

By G. B. I. MILLER

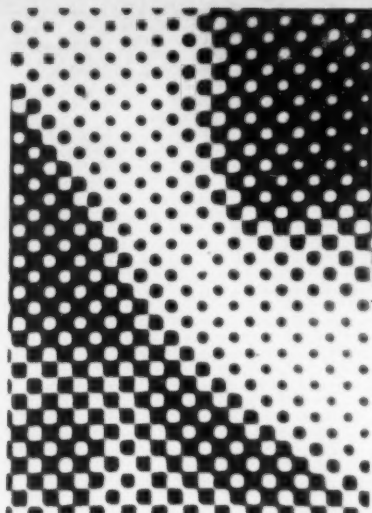
Lithographic Engineer, Engineer Board
Fort Belvoir, Va.

THE Photo and Lithographic Branch of the Engineer Board has subjected the Western Union Concentrated-Arc light source to various tests, relative to lithographic applications. (This light has been given considerable publicity recently. See bibliography.) The results appear to be unlimited in their application to the photomechanical process of offset lithography, from both a military and commercial viewpoint.

Basically, the Concentrated-Arc Lamp is an arc lamp provided with permanent electrodes, sealed into a glass bulb which has been filled with an inert gas. The source of the light in a small incandescent spot (0.003 of an inch in diameter, Model B-2, two watt), which forms on a specially-prepared refractory oxide cathode. The lamp requires approximately 1000 volts D.C. for starting, and approximately 130 volts D.C. for continued operation. The power supply available and necessary for operation from 110 volt A.C. weighs approximately four pounds.

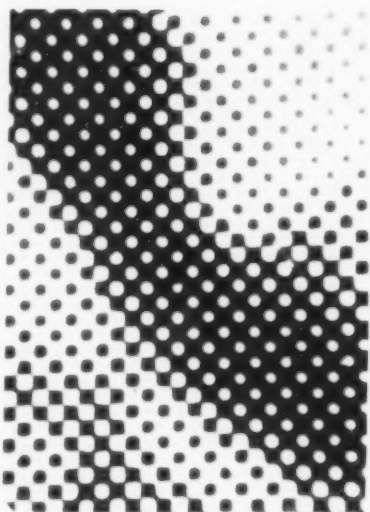


Original 300 Line Screen Negative

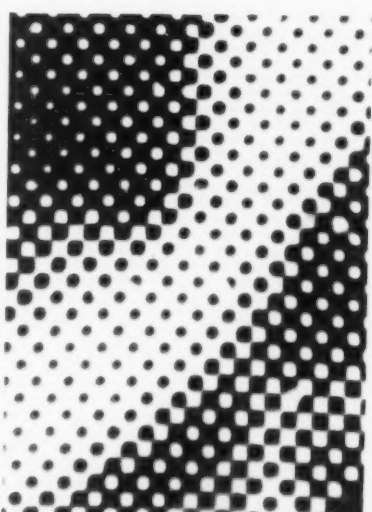


Positive

Figure 1

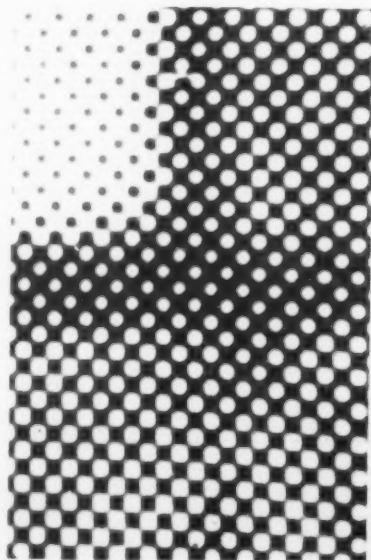


Duplicate Negative

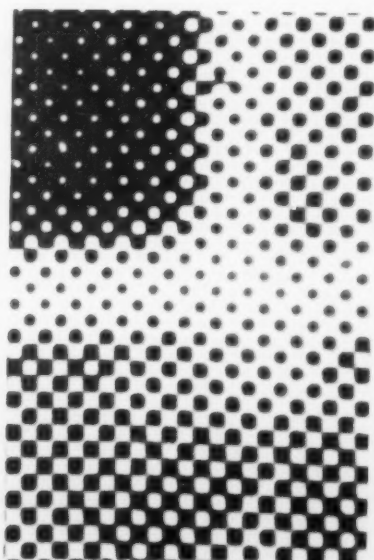


Reversed Positive (Thru Base of Original)

Figure 2



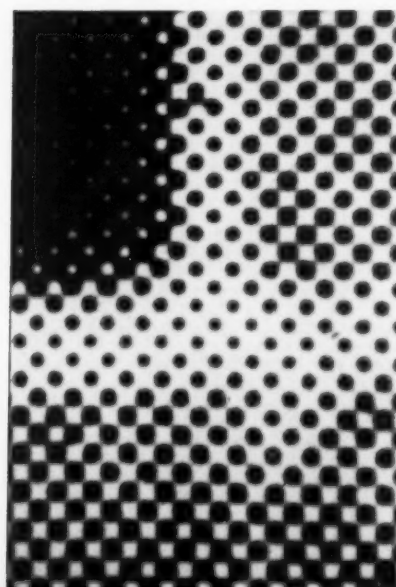
Original 300 Line Screen Negative



Positive (Vacuum)

Figure 3

Fig. 4. Contact Positive (No vacuum).



The method employed in the duplication of screen negatives or positives, or the negative-to-positive or positive-to-negative step, has always been approached with some misgivings by the novice as well as the qualified process photographer. Results have always been dependent upon the skill and personal ingenuity of the operator, coupled with the inherent deficiencies of so-called pinhole light sources. The procedure employed by use of the Concentrated-Arc light source may be standardized to the degree that any operator, by following a pre-determined exposure chart, may duplicate the results required without resorting to elaborate testing.

Due to the fact that the light emanating from the Concentrated-Arc is, for all practical purposes, a point source, the resulting photographic record is contrastier in range. This result is apparently due to the absence of the visible penumbra. This increase of contrast must then be controlled, by use of a modified developing solution. The final procedure arrived at by the Engineer Board involves changing the developing solution from D-85, or equivalent, to DK-50 (stock), or any comparable so-called soft-working developing so-

lution. The resulting photographic image will be slightly off color. This color does not have any effect on the subsequent printing qualities of the dot formation. The opacity of the dot is equivalent, for all practical purposes, to the dot formation produced by standard photomechanical developers. Tests conducted at the Engineer Board permitted plate exposures at 150% increase, without exhibiting the spread or break-through apparent on half-tone printing under prolonged exposures utilizing original screen negatives.

Tests were conducted with the following listed material:

1. Original 300-line contact screen negative, Standard 0.007" base.
2. Western Union Concentrated-Arc Light Source, 2-Watt, Model B-2.
3. Conventional Vacuum Frame.
4. Standard Base, Photomechanical Film Material.
5. DK-50, or equivalent, developer.
6. Two sheets plate glass, 20" x 24", 1/4".
7. Black paper.
8. Blotter stock.

The light source was enclosed in a ventilated housing, Figure 6, with attachment of a standard Packard shutter, permitting greater exposure control. The light source, therefore, remained constant-burning.

Test positives were made by contact, and when contacted back onto photographic material, rendered an image that duplicated the original negative with its characteristic ghost bridge formation. The former heavier ghost bridges, however, had now become more opaque.

Due to the characteristic sensitivity of the bichromated colloid coating employed on press-plates, prolonged or fore-shortened exposures during the plate-printing operation may permit variations in final tone quality, when utilizing an original screened camera negative, due to a minimum or maximum break-through of the bridge or halo formation. By use of duplicate negatives made by the process described herein, greater control over duplicate image exposure is thus assured. Additional duplicate negatives or positives may be produced that will balance one another in photographic value, permitting compos-

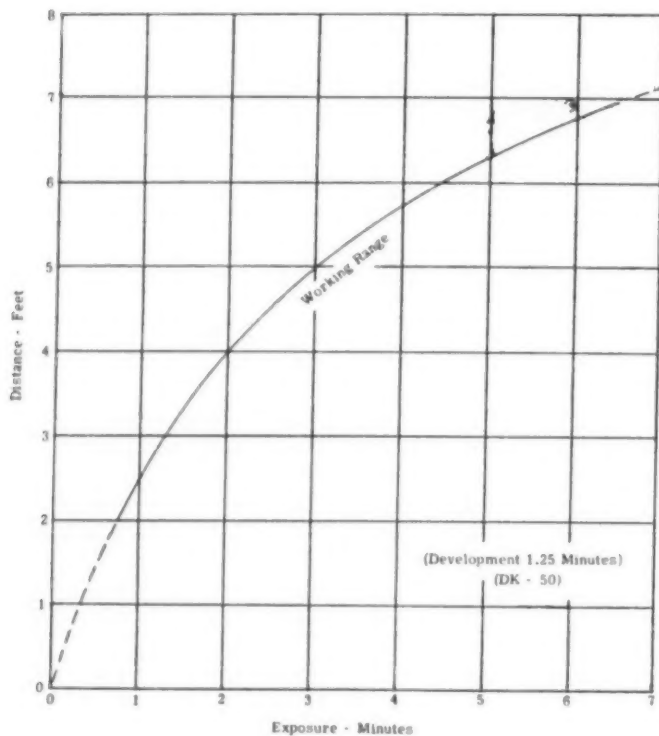


Figure 5

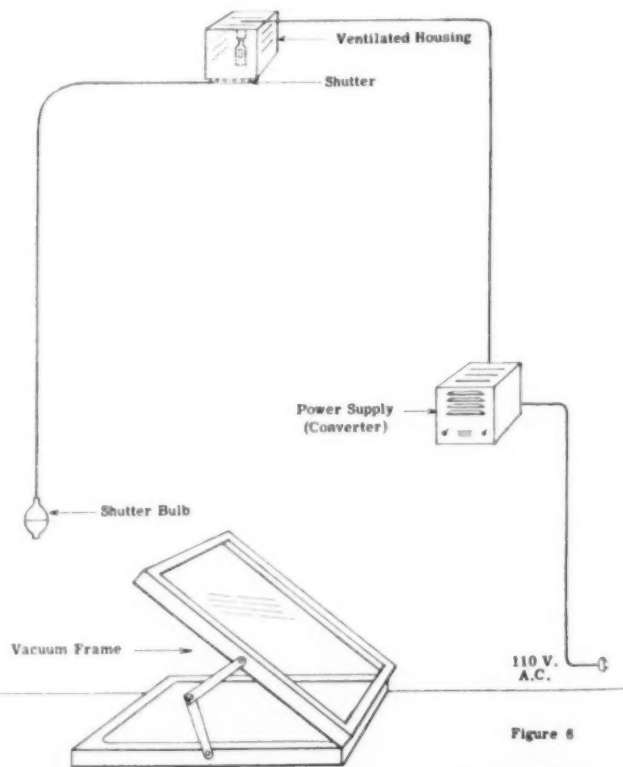


Figure 6

ite grouping with single exposures of large layouts.

Owing to the point source of the illumination, contact image quality is nearly achieved when printing through the back surface of the original reversed contact positives to be made directly from camera screen negatives, which ultimately may be employed in deep etch plate-making. The quality of the resulting positive is comparable with one made by contacting emulsion to emulsion. There appears to be an absence of the penumbra, while the umbra cast is extremely sharp and well-formed.

Additional benefits may become apparent to the operator as the technique is mastered. A possible greater fidelity in dot formation is the result of holding the halo or bridges connecting the dots. Overall tonal characteristics of the original negative are retained and probably improved in either the reversed positive or straight positive, or in duplicate negatives or positives.

The varying size of negative material utilized in production of large-scale photo-litho copies necessitated a maximum light distance of seven feet to be recommended. This distance will enable the operator to standardize exposure for all possible duplication of material up to and including sizes encompassed within a circle of thirty-six inches in diameter. Naturally, some loss of light is encountered towards the rim of the circle at its maximum size. However, while theoretically the loss amounts to approximately 4%, practically speaking, the loss is negligible. The additive action of prolonged exposures, short developer and short development, tends to balance out or equalize the density of the resulting photographic image over the entire area. Development time is approximately one and one-quarter minutes.

An interesting experiment was conducted by use of two sheets of plate glass without resorting to a vacuum system. The original 300-line screen negative and unexposed film (emulsion to emulsion) were sandwiched between the glasses mentioned, with one sheet of black paper cushioning the under side of the unexposed film.

Total weight of the glass employed was approximately 3 lbs., size being 20 x 24 inches. The results, although not perfect, nevertheless are acceptable, and indicate that screen duplication would be possible if the vacuum supply were to fail in its operation. The dot formation compares favorably with results obtained from incandescent lighting systems, now in general use.

Utilization of this method of screen duplication brought forth one interesting point. That is the dot formation in areas surrounding so-called dust specks was apparently free of the deformations which usually exist. These foreign bodies are invariably present on the under surface of the vacuum glass or film surfaces. Depressions visible in the uppermost surface of the sandwiched material prior to actual exposure were not apparent in the resulting image. Naturally, a loss of image is apparent in that portion coincidental with the light rays. This loss is restricted to an area practically equal to that occupied by the foreign body, absorbing the light rays.

It is impractical to duplicate variations in tone and dot size of a 300-line screen for a large area and permit an accurate analysis dot for

dot. Therefore, identical sections of the negative and positive produced were subjected to a high degree of magnification. These enlarged sections are reproduced as figures 1, 2, 3 and 4. A careful scrutiny of the illustrations show the practicability of the procedure discussed.

The exposure chart, Figure 5, may be utilized at the discretion of the operator. Local conditions and required results may modify the effects obtained, as well as the techniques employed.

This article is not to be construed or interpreted as indicating any endorsement of any product or manufacturer. The products referred to were merely the ones subjected to or employed in testing, due to availability.

At the time of publication, the Engineer Board is supplementing the aforementioned tests by additional research, relative to the Concentrated-Arc Lamp and any possible military applications.★★

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Creating a Selling Package

By Thomas D'Addario, Package Designer*

PACKAGES need to be sold twice; first, when the new package, fresh from the designer's mind and still in its sketch form, is presented by its creator to the client. It is a happy theory that a good package design wins immediate acceptance by the client, but in practice I have discovered some of my most successful packages were at first rejected by clients.

Sometimes these designs won such doubtful praise as "they look fine, mind you, but they're not for us;" or "it isn't exactly what we had in mind." Very often the fear of too

radical a change encouraged rejection. At this point a designer worth his salt shows his mettle. It is so easy to slant his approach and designs to win a smooth acceptance by giving a manufacturer exactly what he wants, even when the designer knows that it's the wrong solution. I believe, though, that the average manufacturer will value and respect a designer who conscientiously and frankly states his convictions. Further, he can diplomatically present two solutions: (a) along the lines that his client *wants*; (b) along the lines the designer feels his client *should* have. Usually, if a designer is sincere and

(Continued on Page 93)

* Based on a talk before the Young Lithographers Association of New York, February 19, 1947.

An Unusual

PERSONNEL PROGRAM

Colson Company's plan covers everything from profit-sharing to cleaning workers' windshields

OVER the nationwide wires of one of the news services in January went a story about the broad program which the U. O. Colson Co., Paris, Ill., employs to keep its management and employees happy. In a time when labor strife filled the newspapers, this story, showing another side of the picture, was widely published.

The Colson Company, lithographers of calendars, fans and advertising specialties, has developed an extensive program that includes everything from providing resort cottages for vacationing workers to fixing without charge flat tires occurring in the company's parking lot.

The firm's house magazine *Colson Comet* recently devoted most of an issue to describing the program. The company began with a job press in a hotel room in 1893, and since that time a cardinal principle has been to provide a share in the profits for all those who were responsible for the company's success. Employees are termed "co-workers" and a spirit of teamwork has been developed among employees.

The outline of the program, as published in the *Comet*, was written by 12 company employees, and is reprinted here, as written, from the employees' viewpoint:

Our company has long been recognized as one of the nation's leading calendar and specialty manufacturers and the world's largest

manufacturer of cardboard advertising fans. Business and professional men all over America today point with pride to the U. O. Colson Company as an ideal industrial organization.

There are a thousand and one contributing factors, each being an important and appreciated part of the finished mold. Space does not permit us to go into details but we'd like this opportunity to tell a few of the reasons why our wage scales are among the highest in the country in our line of business . . . why our production is the highest in the industry.

Salesmen's Contracts

The contracts of our salesmen are considered the best in the industry. They include adequate territorial arrangements that work to the advantage of the salesmen, top liberal commissions and 100% co-operation on the part of home offices. Numerous promotions and promotional material are provided to help Colson salesmen. There are many contests and Colson salesmen are awarded thousands of dollars and numerous other prizes as incentives to further Colsonize their territories.

A most important feature of our company's contract with its salesmen is the bonus trust. Salesmen are paid a bonus based upon the annual volume of business on a graduated scale which runs as high as 5% of the total amount of sales. The bonus serves as a reward for loyalty on the

part of the salesman. The bonus trust increases with each succeeding year and there is a retirement income accumulated for the Colson salesman as a reward for loyal and outstanding services throughout the years. These bonuses are deposited in a fund established with the trust department of the Edgar County National Bank of Paris, Illinois.

Colson Foundation

The Colson Foundation was organized in January 1945 by the Co-workers of the U. O. Colson Company as a philanthropic organization. The Foundation operates independent of the Colson Company and any of the stockholders, directors and officials of the Company. The present board of directors of the U. O. Colson Foundation are Lillian Turner, president, John Redmon, vice president, Joe Harris, secretary, Ross Howard, treasurer, R. H. Kienast, Harold Ballard, Anna V. Williams, Jessie Dawson, Laura Cummins, Edith Sprague, Percy McMullen, Norman Harrison, Kenneth Stephens, Roy Dahlgren, Fred Kuhn, and Marie W. Colson. Each year the Company presents a sizeable check to the Foundation members without suggestion or approval from any other sources.

Clean Windshields

The Co-workers of the stock room, under the direction of Ross Howard, always have our cars ready to go in

This is a sketch of the plant at Paris, Ill.



inclement weather. Just a few minutes prior to quitting time at noon and in the evening, accumulations of ice, sleet and snow are removed from the windshields and windows of cars of all Co-workers. In the summertime these same folks are on the alert to roll up all our car windows in the event of a sudden rain storm.

Wedding Gifts

The company donates wedding gifts to every Co-worker on the occasion of his marriage.

On-the-Job Rewards

Thousands of dollars are appropriated by the U. O. Colson Company each year to be used as incentives for increased production. During 1946 these awards were incorporated in an "On-The-Job" Program. Six new automobiles and several thousand dollars were awarded at 60-day intervals. In addition, the sum of \$1 was added to all Co-workers' attendance bonus checks for each week they were neither absent nor tardy.

Insurance

Each Co-worker carries group insurance with life, accidental death and dismemberment, accident and sickness, weekly benefits, hospital room and board, hospital fees, surgical payments and other fees. The premiums are paid jointly by the company and Co-workers. This group insurance also covers the Co-workers' families.

Vacations

All Co-workers who have been with the company one year or more receive an annual vacation of two weeks with pay; those with the company less than one year but more than

six months receive one week's vacation with full pay.

Parking Space

Every Co-worker who drives to work has a private reserved parking space for his individual use the year around conveniently located to both the Main and Central Avenue entrances. Each space is marked with the name or initials of the Co-worker, whichever is desired.

Convenient Entrances

Ordinarily Co-workers use either the Main Street or Central Avenue entrances upon reporting for work and on leaving in the evening and the time clocks are conveniently located for both these entrances. In inclement weather Co-workers are permitted to use the back door as an easy entrance and exit for reaching their parked cars.

Cold Prevention

Each and every Co-worker is provided a cold treatment in the fall without cost. Additional treatments for the Co-workers' families may be secured at wholesale cost through the company.

Flowers for Sick

When Co-workers are absent because of sickness the company sends flowers in every instance. When death strikes at the home of any Co-worker, the company and the Co-workers always send floral tributes as a token of their sympathy.

Promotions

The individual abilities and outstanding works of every Co-worker are closely watched by supervisor, middle management and top management. Superior performances are al-

ways recognized and higher positions with increased responsibilities and more money is always a reward for continued meritorious performances.

Profit-Sharing Trust

At the close of each year our company sets aside a substantial portion of its earnings to the Profit-Sharing Trust. All Co-workers who have been with the company two years or more participate each year in this trust on a percentage basis proportionate to their annual earnings. The Trust Funds are on deposit with the Citizens National Bank of Paris, Illinois, and are controlled entirely by the trustees of the fund.

Parties

During 1946 our company entertained the Co-workers with numerous parties, get-togethers, picnics, etc. Outstanding speakers, musicians and other notables were present at these parties to entertain. Detailed plans for 1947 have not yet been announced.

New Babies

When a baby arrives at the home of a Colson Co-worker, he is closely followed by a letter from the company with a \$25 savings bond issued in the name of the new arrival. In the last year or two more than 30 of these bonds have been issued and the policy will be continued.

Fishing Contest

Even though the company has no set policy about contests for catching the largest fish or reporting the catch of the largest fish, numerous surprise contests are held annually. In the past cash and bonds have been awarded champion fishermen. The company held a fish dinner last fall.

Resort Facilities

The Colson cottage at Twin Lakes Park is available to all Co-workers and their families throughout the summer without cost. The cabin is available complete.

Approximately 35 boats at Twin Lakes Park are available for the use of all Co-workers and their families without cost.

Home Ownership

The Colson Company makes available to the Co-worker 50% of the difference between the cost of a new home and the amount of money advanced by the local building and loan associations. Numerous Co-workers have been able to purchase homes under this plan.

Christmas Observance

Numerous prizes and gifts are distributed to Co-workers at the annual Christmas party. Attendance bonus checks are distributed at the Christmas party.

20-Year Watches

It has been the policy of our company to award a wristwatch to all Co-workers on the completion of their 20th year of association with the U. O. Colson Company. To date approximately 20 of these watches have been presented.

Clean Sidewalks

Practically the entire period from December through March Paris is blanketed in snow. Sidewalks in front of both the Main Street and Central Avenue entrances and to the parking area, bus stops and nearby restaurants are cleaned daily when necessary permitting Co-workers to reach these points without slushing through snow and mud.

Recreation

Recreation rooms have been provided on all floors for the convenience of our Co-workers during the lunch periods. These rooms contain tables, benches, soft drink boxes, vending machines for candy and gum, news-

(Continued on Page 89)

HELP FOR THE VETERAN STARTING A NEW BUSINESS

By **WALTER E. SODERSTROM**

Executive Secretary
Natl. Assn. of Photo-Lithographers

THE National Association of Photo-Lithographers has spent considerable time in setting up hourly costs for veterans who have purchased lithographic equipment to set up their own plants.

One day in the week, usually Saturday, is set aside for this work. New plant owners make an appointment to come to this office with complete information on their new lithographic plant—capital investment, rent in dollars and square feet, wages, office, etc. Each item going to make up economic hourly rates, based on what the new lithographer intends to pay in his plant, is then carefully analyzed and listed under appropriate departmental heads. Item after item, after being analyzed, is listed on a columnar sheet. All computations are made by the lithographer himself. This gives him a first-hand knowledge of what goes into making up economic hourly rates. After a few hours' work, these new lithographers find what it will cost them in their specific plants to operate their machine or man-hour units. The total cost of each department is then budgeted over the productivity which the potential lithographer anticipates.

At this point the new lithographer has set up a budget of the cost of operating his new lithographic plant for the first year. He is then asked how he intends to apply this newly acquired information. Those at the table are given a simple spot colored broadside or two, with the comment, "Let us assume this is the first job you have been asked to quote on in your new plant. Will you, for your

own benefit, using the new hourly costs you have just worked out, set up an estimate on what it will cost you to produce 2,500 or 5,000 of these broadsides?"

Often, at this point, the new lithographer is absolutely lost. He knows very little about analyzing copy, lay-out, color, or production. However, we point out to him that, now he has made his capital investment, the estimates he will make from now on, will make or break him. The new lithographers are then left alone to work out the estimates on their own.

Of course, after each new lithographer has submitted his estimate, the job is carefully analyzed and an estimate worked out for the specific equipment he has in his plant.

These new lithographic plant owners who participate in this kind of educational work are very appreciative of this help. They have worked out, for themselves, for the first time, the cost of operating the departments in their plant; they have made an application of this information to a specific job or two; and, on joining the association, (a requisite for this service) they have received a large package containing a uniform accounting and cost system, the trade practices in the industry, and other factual information.

Others entering the lithographing business, who are interested in making such a study of their costs, either by correspondence or in one of these Saturday sessions, may write or call the association, at 1776 Broadway, New York 19.★★

From Job to Job—Year to Year

FROM exposure to exposure, from job to job, from year to year—Eastman Kodak Company's materials and equipment for the Graphic Arts maintain the finest quality.

Produced under rigid laboratory control, Kodak films, plates, papers, and supplies meet the most critical requirements of today's photomechanical work. The photographic and physical properties of these products are dependable and accurately uniform.

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This comprehensive service to the Graphic Arts industry is rounded out by a staff of expert Kodak technical representatives ready to assist in solving the most complex photomechanical problem.

Kodak products for the Graphic Arts are distributed by Kodak Graphic Arts dealers located in all large centers throughout the country.

GRAPHIC ARTS DIVISION

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extra protection of*
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**...IN YOUR PLATE
AND PRESS ROOMS?**



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1-Gallon and
5-Gallon Cans

**IT'S *more*
THAN JUST "ASPHALTUM"**

Special ingredients in Harris Litho Asphaltum protect images longer on the press, as well as in storage. You will be amazed at the increase in plate life when you use Litho Asphaltum regularly as a straight washout during long runs.

Because Litho Asphaltum is less soluble in press inks, it reduces mushrooming of dots and greatly increases ink receptivity. Tough, acid-resistant qualities prevent etches from damaging the image.

You get these extra protections with a saving in time because no turpentine wash is needed before Litho Asphaltum is applied. It's easy to spread and easy to remove from stored plates. Use it for better results in platemaking, washouts and plate storage.

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Order Harris Litho Asphaltum from your nearest dealer:

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HARRIS-SEYBOLD COMPANY, Atlanta—Dallas

A. E. HEINSOHN, Denver
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METZGER PHOTO SUPPLY COMPANY, Akron
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EVERYTHING you want — and have a right to expect in an all-purpose bond paper — is yours in *Permanized Plover Bond*.

Quality characteristics are immediately apparent . . . even to the layman. That's because superior raw materials are blended with a whale of a lot of paper-making know-how . . . and the final touch is air-drying, which not only makes quality permanent, but also imparts a distinctive Light or Full Cockle Finish.

Two other essentials: *Permanized Plover Bond* press-performs perfectly (even at high speeds) and is priced moderately . . . much lower than its splendid appearance would lead you to believe.

Samples? You bet! That's the reason for the convenient coupon. Clip, clip, clip it *now*!

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Permanized Papers
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Whiting-Plover Paper Company
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Please send, without cost or obligation,
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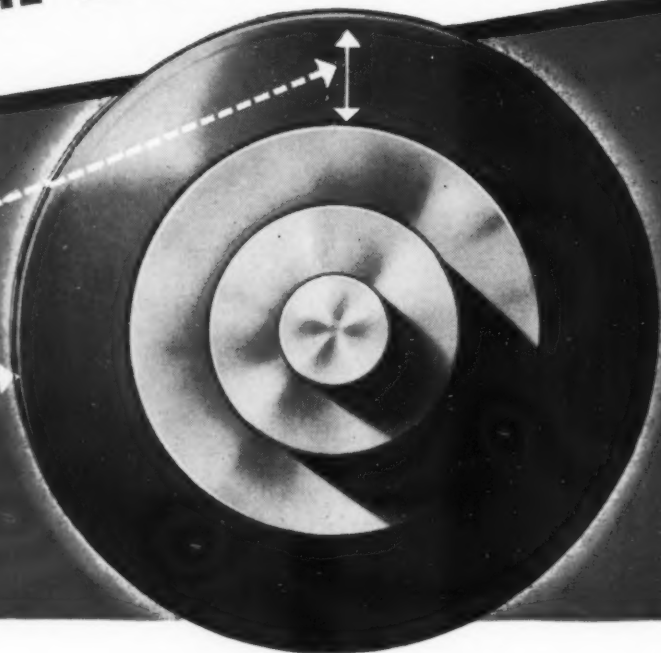
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DAYCO FACT

You just Renew the Surface
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YOU SAVE ALL THIS ...

BECAUSE THIS IS ALL
YOU NEED TO REPLACE
TO GET A DAYCO
GOOD AS NEW



MORE DAYCO FACTS that mean better quality printing at lower cost

1. Dayco Rollers are ground so accurately that a kiss touch is obtained with minimum adjustment.
2. When Dayco Rollers finally wear out they can be re-Dayco'd at one third the cost of new rollers.
3. Daycos take any kind of ink... heat set, metallic, fast drying, oil base, or any of the newer inks.
4. Dayco Rollers are so perfectly balanced they run true without whip, reduce bearing wear to a minimum.
5. Fused Ends of Dayco Rollers make possible finest roller performance plus renewable surface economy.
6. Dayco Roller compounds are multiple refined to secure a uniform, soft, smooth texture so essential to fine printing.

Ask about the Dayco EXTRA
CORE Plan

One Reason Daycos Cost Less in the Long Run!

It costs you less than one third the price of a new roller to have worn Daycos renewed to original efficiency! That's because with a Dayco you renew *only the surface* ... not the entire roller. That's real roller economy! And re-Daycoing means rebuilding with original care and precision. Daycos are perfectly balanced, accurately ground with ends fused in one solid, inseparable compound. That's why you can use the same kind of inks, obtain the same high-quality printing results and get the same long wear from a roller that has been re-Dayco'd as you do from a new Dayco Roller. Take advantage of re-Daycoing savings—write today.

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NO-STAIN RUBBER CEMENT SYNTHETIC

Here's a new rubber cement compounded of high quality ingredients, hold quickly and securely. Easy to apply and excess is quickly and cleanly removed with fingers or cloth. It can easily be reduced to desired consistency with NO-STAIN THINNER.

Gallon **\$3.00**
Thinner (per gal.) **1.50**

BLUE PLATE SOLUTION CONCENTRATE

Add water to this concentrated solution (in equal parts) and you have a fine Blue Plate Solution. It does away with all the tedious work of dissolving in hot water, filtering and allowing to cool that a Blue Plate Powder necessitates.

Quart **\$1.25**
½ gallon **2.25**
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PLA-STIK STRIP FILM ADHESIVE

With the growing use of plastic sheeting throughout the offset industry, this new adhesive provides another working tool to speed production and aid in getting better results. It can be applied easily to either the new sheeting, to glass or to film. It is ready to use and possesses every quality necessary for good stripping work.

Quart **\$2.00**

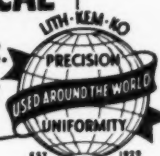
PLA-STIK OPAQUE SOLUTION

Easy flowing and completely opaque is the best description of this new solution. It can be applied with brush or pen to film, glass or the new plastic sheeting. It is ready for use and because of its fine ingredients, a little can do a lot of work.

4 oz. **\$1.00**
8 oz. **1.50**
Pint **2.60**
Quart **4.75**

Other products in the
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GRAPH BLACK OPAQUE • VELVO RED OPAQUE
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Do you know ALL the facts about our side-stitched, cover-glued binding? It's a binding method that's adaptable to a wide variety of jobs, and is particularly suitable to books of 64 pages or more. In most cases it is as economical as other types of binding. Side-stitched, cover-glued binding is a practical method that's been proven. Why not keep in mind the possibility of using it for your next binding job. We will be pleased to submit prices on your specifications.



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- **High Productive Speed**
- **Hairline Register**
- **Non-Stop Operation**
- **No Transfer Cylinder**
- **Automatic Register Control**
- **Unit Construction**

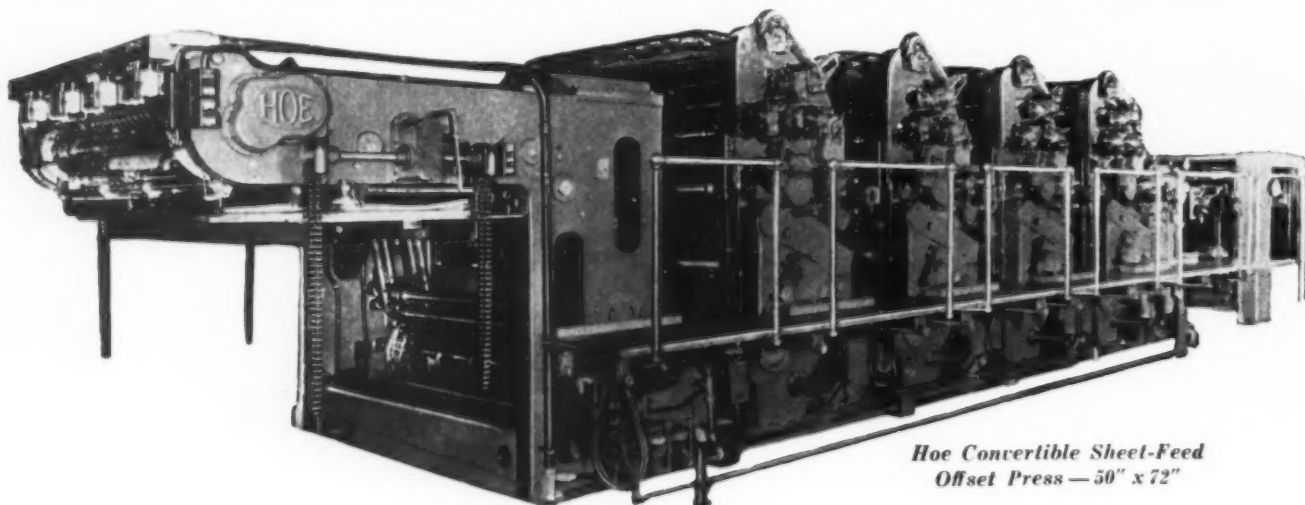
Because of these features, the Hoe Convertible Offset Press breaks all records for maximum production of beautifully lithographed 50" x 72" sheets. Continuous, uninterrupted operation—thanks to the Hoe patent non-stop sheet registering feature—makes possible 6000 impressions an hour.

Traveling grippers, which retain their hold on each sheet throughout the entire printing process, insure exact over-all sheet registration from edge

to edge. Transfer cylinders are eliminated, this being the only sheet-feed offset press where the sheet never becomes a fixed part of a cylinder for a considerable portion of its revolution.

Low maintenance, through long years of service, is assured by the massive construction of the press plus lavish use of heavy roller and ball bearings.

Hoe unit-construction makes it easy to add more units whenever needed for additional colors.



*Hoe Convertible Sheet-Feed
Offset Press — 50" x 72"*

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PAPER PROBLEMS

TO reduce troubles of any origin in a manufacturing process is to reduce loss of time, loss of material and loss of production. When losses are held at a minimum, better scheduling and estimating are possible. Annoying troubles also lower quality, and the morale of workers.

Many of the troubles encountered in the use of paper in offset lithography are dealt with in other Foundation publications. For this reason, some preventive measures are touched upon only lightly here and reference made to those books that deal more thoroughly with the subject.

Picking

In the operation of an offset lithographic press it is not an uncommon occurrence for small flakes of the stock of plain paper or coating of coated paper to break away from the sheets and adhere to the blanket. The term used to identify this condition is "picking".

These flakes may remain on the blanket throughout subsequent impressions and cause poorly printed areas appearing as spots as a result of

improper ink transfer. Or the flakes may be picked up by the plate and from there get onto the inking rollers, forming a pulpy mass when mixed with the ink film and causing spooks or "hickies" in the work.

Picking occurs when the bond strength of the paper is not equal to the pull that is exerted upon its surface as it is peeled off the blanket.

If picking occurs in non-printing areas, it is probable that the blanket has become excessively tacky due to oxidation. (See Shop Manual No. 6). If it occurs in the image areas it may be due to too tacky an ink or a weak paper.

A test of the bond strength of paper may be made by the use of waxes designed for this purpose (See Shop Manual No. 19). Paper with insufficient internal bond strength will not resist a normal pull. Installing a new blanket will usually overcome picking in the non-image areas. If the paper picks in the image areas, the tack of the ink should be reduced.

In the case of coated papers, picking may result from lack of bond between coating and stock, or it may be due to a weakness of the stock itself. The paper may be tested with waxes and if the coating lifts off clean, it would indicate a weakness

in the bond between the stock and the coating. If fibres adhere to the coating when it lifts off, it indicates insufficient bonding of fibres in the body stock.

Very often a good sheet of coated paper will come apart in the press due to a crack in the coating. Careless handling of the paper, or improper setting of some of the feeder adjustments may cause a fracture of the coated surface. The tack of the blanket or ink will then strip the paper of some of its surface. Any other defect in the paper such as an incompletely refined fibre cluster will sometimes weaken the paper where this cluster is located and its surface will pick in the press.

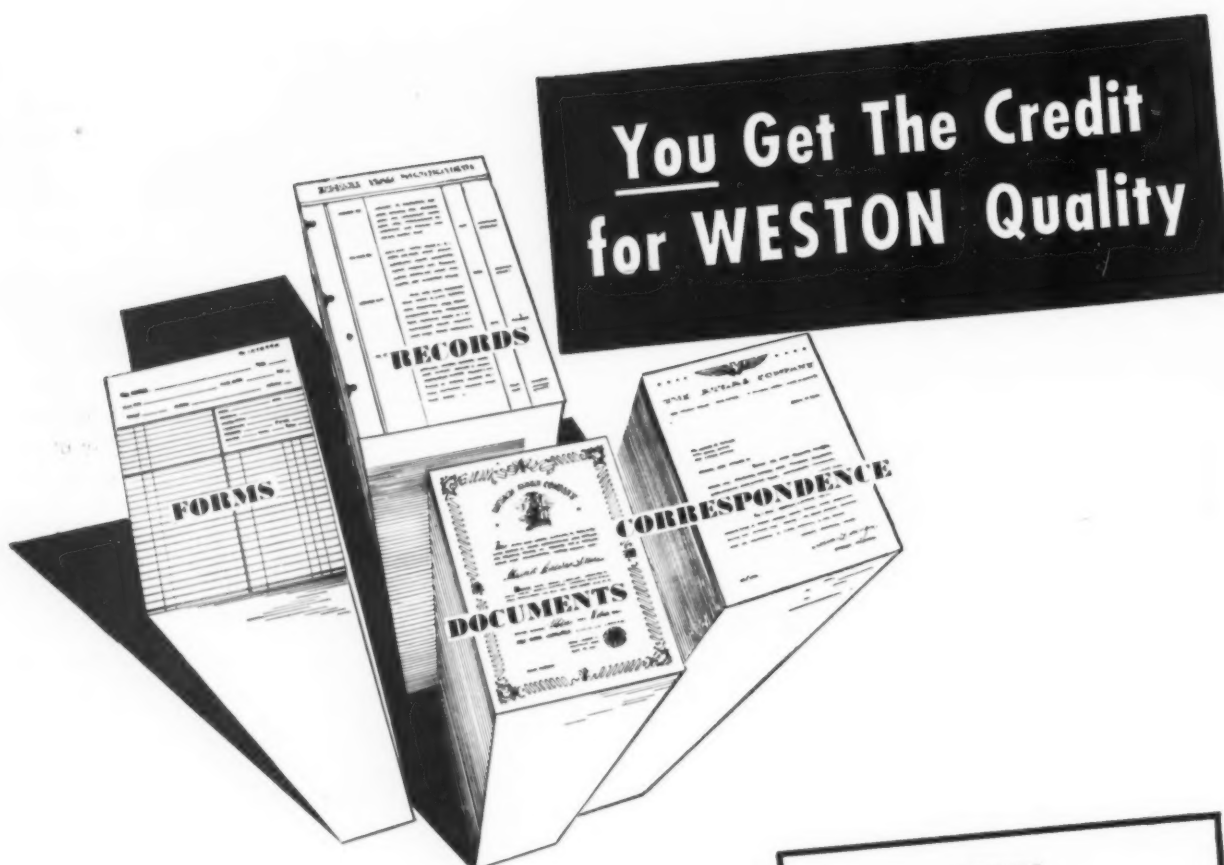
Fuzz and Powder

On uncoated sheets, linting or fuzzing sometimes occurs in the press. Paper fibres may come loose and adhere to parts of the feeder and guide mechanism as well as the blanket. In such cases the blanket and plate have to be washed frequently. The small working parts of the press may also have to be vacuum cleaned.

Linting or fuzzing may generally be traced to lack of, or insufficient, surface sizing. It may also be due to excessive tack of the blanket or ink. Static electricity often causes loose lint to adhere to metal parts of the feeder mechanism from which it eventually drops on a passing sheet and is carried to and picked up by the blanket. The only recourse besides changing the paper is to change to a new blanket, or reduce the tack of the ink. Elimination of static is important for proper feeding and delivery of paper, but it will not prevent loose fibres from being picked up by the blanket.

Excessive powdering causes poor transfer of ink from the blanket to the paper, and a mixture of ink and powder will form on the blanket in a caked condition. This occurs on coated stock where the coating is improperly sized. The coating slip, like ink, is made up of pigment and vehicle. If the paper stock is highly absorbent, too much of the vehicle goes into the paper before setting occurs and leaves the pigment improperly

* Excerpts from Shop Manual No. 27, "Paper Troubles in Offset Lithography", being issued soon by the Lithographic Technical Foundation. In addition to the excerpts published here, the manual will contain extensive information on paper curling and ink drying troubles. The complete pocket-size manual may be obtained from the Foundation for 25c.



Customers judge your work by appearance but when it comes to lithographed letterheads, records or forms, they rate the job most on the performance of the *paper*. And when the paper makes a hit, when it looks well and suits your customer's every wish, *you get the credit!* So why not make sure *in advance* that every job will be a winner? Why not use Weston cotton fibre Papers—papers that for over 80 years have been the outstanding choice of people who know most about records?

LETTERS ARE RECORDS! Use WESTON Bond Papers for letterheads designed for information worth keeping.

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Extra No. 1, 100% New White Cotton and Linen Fibre
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INDEXES

- WESTON'S DEFIANCE INDEX**
100% Cotton Fibre
- WESTON'S WINCHESTER INDEX**
50% Cotton Fibre
- WESTON'S MACHINE POSTING INDEX**
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WESTON'S TYPACOUNT LEDGER
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50% Cotton Fibre

bound so that it powders off in calendering and going through the press. Besides changing to other stock, the only alternatives are (1) to run such paper through a bronze dusting machine, (2) to print a size or tint base all over the sheet, or (3) to wash the blanket periodically.

Misregister

The term misregister is used here to denote a variation in placement of the sheet in relation to the entire image on the plate. Once a sheet has been brought into perfect register by shifting the plate or the guides or both, subsequent sheets should also register, at least along the gripper edge. If they do not, the press is not registering.

The cause of misregister may be one of many having to do with press adjustments. (See Shop Manual No. 9). The cause can also be paper irregularities. If the sheet has a wavy gripper edge, some difficulty is experienced in getting the edge to enter the guides uniformly. This often leads to both front and side misregister.

Wavy edged paper occurs when the edges of the sheet contain more moisture than the rest of the sheet. This condition develops when a pile of dry sheets is exposed to a moist atmosphere. (See Shop Manual No. 1.)

Another cause of misregister is feather edged paper. Such paper will not guide properly because it does not have a clean cut blunt edge to rest against the guide stops. The feather causes variation in the stopping point as well as a resistance to a sideways movement. A feather edge on paper is generally caused by a dull knife and improper support from the cutting stick.

A third cause of misregister that may be traced to the paper is that of a bowed gripper edge. If this edge is not straight when used in multiple guide presses, some sheets will go farther into the guides than others. Another possibility is that some sheets will go into the guides farther on one corner than the other.

A bowed gripper edge is caused by cutting a lift of paper that has un-

even moisture distribution and therefore uneven clamping pressure in the cutting machine. If such paper can be conditioned so that wavy edges disappear, it can generally be cut

straight. If the waves have become set, the best method is to retrim the paper in very small lifts. Packing the lifts with strips of cardboard to

(Continued on Page 57)



SOMETHING entirely new in photography was unveiled February 21 at a meeting of the Optical Society of America with the demonstration of a camera which takes a picture and produces a completed print in one minute. The device was demonstrated by Edwin H. Land, president and head of research of the Polaroid Corp. With the new camera, Mr. Land said it will be possible for a photograph to be taken, a print produced immediately, and the picture taken again, if necessary, with proper exposure or other adjustment. The camera can be manufactured in the same variety of sizes and shapes as present-day cameras, but will not be on the market for several months. The selling price has not been announced.

The camera contains a roll of special photo paper in addition to the usual roll of film. After the film is exposed it is joined, emulsion-side down, to the print paper and together they pass through two small pressure rollers, the movement provided by the turning of a small knob. Developing and printing take place automatically without tanks, and a minute later, passing outside the camera box, the film is peeled off the paper, and the latter has become a permanent print.

The pressure rollers break a tiny sealed container attached to the paper. This releases a thick chemical which spreads between film and paper and effects the development. The exact amount of chemical for one picture is included in each tiny container.

Opaque backing on film and paper prevents fogging when they roll out of the camera. Hydroquinone and sodium thiosulphate or hypo are the chemicals used, it was said. Prints can be black and white or sepia.

When developed on a commercial scale the camera could reduce the time elapsing between the taking of photographs of products or persons for advertising and the time finished copy can be turned over to the lithographer for reproduction.

ml

Per capita consumption of paper in the U.S. is about 320 pounds per year says the Bulkley, Dunton Pulp and Paper Bulletin. This compares with an average of 1 to 3 pounds per capita for over half the world's population. Paper production is still riding high, but demand is still above it.

ml

Speaking of paper, the elaborate brochure, *Better Impressions*, issued periodically by The Mead Corporation, is a slick job. Contains interesting art and layout, and utilizes several types of paper and reproduction processes.

ml

"Friendly Tips About This Company of Yours" is the title of a spiral bound handbook distributed to Harris-Seybold employees to acquaint them with the various activities of the firm. The historical background of the H-S organization, covering more than half a century, is presented, and numerous pictographs, photographs, and drawings are used to tell the story of company policies. In addition to being distributed to all members of the Harris organization throughout the country, the booklet is also being used to recruit new

The printers of Egypt

had to say no

Professional scribes, the “printers” in the time of the Pharaohs, had only two inks—red and black. They had to turn down any customer who had a yen, say, for green.

Today, maybe you have troubles, but at least you don’t have to refuse work just because you can’t get inks in the colors your customers want. Johnson Inks come in all colors. Just send us samples of the shades you want and we’ll provide the inks. Because of our 143 years’ experience you can expect top quality, too.

CHARLES F. NEW Johnson AND COMPANY
GOOD INKS SINCE 1804

10th and Lombard Streets, Philadelphia, Pa.

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BALTIMORE • KANSAS CITY • PITTSBURGH • ATLANTA • DALLAS**



COLOR PHOTOGRAPH BY HUGH HAZELRIGG

Business moves—when Color clears the way!

RAILROADS use the power of color to couple speed with safety. The same urgent appeal of color can be made to play an important role in business efficiency. Using the easy-to-identify colors of HOWARD BOND to identify

each page of multiple business forms greatly speeds recognition of the separate units and facilitates distribution and filing.

In its broad range of clear, clean colors and in *whitest* white, HOWARD

BOND is a *quality* bond—so good, in fact, that in addition to its wide usage in business forms, it is also a favorite letterhead paper. Thanks to a nationwide list of distributors HOWARD BOND is available everywhere.

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Howard Bond

"THE NATION'S BUSINESS PAPER"





COLOR PHOTOGRAPH BY LEJAREN A HILLER

UNIFORMITY When you consider that a printer's ability to deliver good printing on every job always rests with physical properties of paper, the demand for a uniform sheet is not strange. *Maxwell Offset* is such a sheet.

To the dollar-wise advertiser, this very uniformity of Maxwell's press performance often means that his printed advertising is a *known* quantity rather than an *unknown one*. Remember this qualification of Maxwell, America's leading offset paper.

HOWARD PAPER MILLS, INCORPORATED

MAXWELL PAPER COMPANY DIVISION • FRANKLIN, OHIO

Maxwell Offset

For uniformity—in finish, in strength, in ink consumption, in whiteness or color conformity

personnel. The handbook was produced by Fuller & Smith & Ross, Inc., and the Reliance Lithograph Corp., Cleveland.

ml

One of the interesting points of Harris-Seybold history is that the first Harris factory was located in the frame house at Niles, Ohio, where President McKinley was born.

ml

Some excellent examples of lithographed children's books have come to our desk from Grahame Sands of John Sands Printing, Ltd., Sydney, Australia. One of the books, "The Story of Karrawingi, The Emu", by Leslie Rees was selected by the Australian Book Society as "Children's Book of the Year". The other book "Silvertail, the Story of a Lyrebird," by Ina Watson, like the other, is about native birds of that continent. Both are illustrated by Walter Cunningham in four-color lithography. Mr. Sands reports that there was a great deal of interest in Children's Book Week in Australia last November and that a great many organizations took part.

ml

The first of a series of booklets planned to help Ansco employees better understand the workings of the company and the jobs of fellow workers, as well as to explain the company's benefit programs, recently was mailed to the homes of the division's 4,500 employees.

ml

Demand for the booklet "The Making of a 24-Sheet Poster" has been so great that McCandlish Lithograph Corp., Philadelphia, has reprinted it for the third time. Copies of the booklet have been used over a number of years by art directors, commercial artists, university advertising classes, art schools, etc., as a source of information on how 24 sheet posters are designed and lithographed.

ml

Anti-climax Department—Four bills were introduced recently in the New York state legislature planned to establish a comprehensive billboard control program. One feature of the bills was a prohibition of billboards along the \$202,000,000 New York to Buffalo thruway.

ml

The Arts Bureau of Gartner & Bender, Inc., Chicago greeting card publishers and lithographers, has just issued another brochure in a series of material designed to secure the interest of more and better art work for greeting cards. The brochure's title is "The Greeting Card: Mirror of American Life." The Arts Bureau is located at 510 Madison Ave., New York 22.★★

PAPER PROBLEMS

(Continued from Page 53)

equalize clamp pressure also has been done with success.

Misfit

Misfit is a term used to denote the condition where some of the images or register marks coincide and others do not. If the sheet registers on the front end, but the marks are out toward the rear, the sheet is said to fit poorly.

Poor fitting generally results from paper distortion. Such distortion may be in the form of excessive elongation around the cylinder. Paper that picks up moisture in the press or from the atmosphere will almost always stretch from front to back. A small amount of stretch may be compensated for by changing the ratio between cylinder diameters. Excessive stretch will not only be difficult to compensate for but very often it is not uniform from sheet to sheet. Proper paper conditioning will prevent this condition if the pressroom atmosphere can be kept fairly constant in humidity. (See Shop Manual No. 26.)

Another type of paper distortion is known as fanning. Here the back of the sheet stretches crossways of the press, throwing the corner images out of fit. A third type of distortion is known as drawing in, which is just the opposite of fanning. The sheet in this case actually shrinks across the back. Fanning and drawing are caused respectively by tight and wavy edges, and the remedy is again proper paper conditioning. One common cause of wavy edges is the practice of bringing a skid of cold paper into the pressroom and removing the wrapper before the pile has come up to room temperature. When this is done, condensation will form on the outside edges of the paper and be absorbed.

Excess back pressure has a decided effect upon crosswise fit and should be checked when this trouble arises. A four point squeeze will not distort the average paper to a noticeable degree.

A bowed gripper edge, besides affecting register, will have a decided effect upon the back edge.

A plate that has been stretched, or straightened improperly from a cocked position may produce the same effect as paper distortion. (See Text No. 513.) If misfit continues after all the paper conditions listed here have been eliminated, a check of the plate may be in order. This check may be made with the Register Rule. (See Unit 10 in Text No. 513).

Conditioning Troubles

To reduce the possibility of wavy and tight edges in paper and also to reduce the moisture pick up in the press which results in stretching, conditioning is resorted to.

During a rush of work, the available paper-conditioning equipment may be insufficient to turn out the job that it is called upon to do and the conditioning time may be cut short or the machine overloaded. The result is unsatisfactory performance of paper on the press.

The question is often asked how long should paper stay in the machine? With ten or more variables affecting the speed of conditioning, there is no satisfactory answer to this question other than that it should be left in the machine until it is in condition to run satisfactorily.

Cutting short the time of conditioning is not as harmful as overloading the machine. A properly loaded machine, circulating sufficient air of the proper relative humidity will condition on the average a batch of medium weight paper in three hours. If this time is cut in half, the paper will still be pretty well conditioned. In fact, it will be in better condition than if twice as much paper were put in and conditioned for six hours. (See Shop Manual No. 26).

In overloading a machine by putting too large a lift of paper in each pair of clips, the blowing air has a restricted passage between the sheets. The air may not reach the upper half of the sheet at all. For uniform and fast conditioning the air must

(Continued on Page 85)

BEAUTY IN HALFTONE...

*product of the film that
gives you hard dots*

Hard, clearly defined dots of properly graded formation, obtained with Du Pont Photolith Film, capture all the beauty of original copy material. Put this fine film to test. Let your cameramen try it . . . discover for themselves why so many prefer Photolith. Your dealer can readily supply you. E. I. du Pont de Nemours & Co. (Inc.), Photo Products Department, Wilmington 98, Delaware. In Canada; Canadian Industries Limited.



TOP CAMERAMEN APPROVE THESE SALIENT FEATURES:

Hard dots • Contrast • Speed • Wide latitude • Quick drying
Flat lying • Easy scribing • Easy etching • Convenient packaging

DU PONT PHOTOLITH FILM



BETTER THINGS FOR BETTER LIVING
... THROUGH CHEMISTRY

(Listen to "Cavalcade of America"—Monday evenings—NBC)



The exclusive
"Lite-Lok" box
is a time-saver
in darkrooms.



ABOUT THE TRADE

Metal Decorators Convene in New York April 16-18

TOURS through two plants of R. Hoe & Co., and through the laboratories of Interchemical Corp. will feature the annual convention of the National Metal Decorators Association, in New York Wednesday, Thursday and Friday, April 16, 17 and 18.

The convention is scheduled to open about 11 A.M. Wednesday at the Commodore Hotel and a luncheon is scheduled for that day. The group, which is expected to number some 60 or 70, will then go to Dunellen, N. J. to visit the Hoe press manufacturing plant there. The second day will be devoted principally to a tour of the Hoe plant in East 138 St., New York. On Friday the tour of Interchemical Laboratories is

scheduled. This laboratory is the center of research for International Printing Ink and other divisions of Interchemical.

Also on the three-day program is a cocktail party to be given for visiting delegates by the Brooklyn metal decorators group.

The convention was originally planned for another hotel on a later date but the arrangements were changed during February.

Winslow H. Parker, Parker Metal Decorating Co., Baltimore, is president of the association; William F. Felber, American Metal Decorating Co., Chicago, is vice president; and William Kerlin, Tinplate Lithographing Co., Brooklyn, is secretary-treasurer.

Caldwell Forms Company

J. Albert Caldwell, for the last 25 years associated with Young & Seldon Co., Baltimore, on March 1 announced the formation of his own firm. The new company is known as Universal Lithographers and is located at 35 South Frederick Street, Baltimore.

Mr. Caldwell is active in the affairs of the Litho Club of Baltimore, and served two terms as president, from 1942 to '44.

Chicago Holds Labor Meeting

The first of a series of local area meetings on the lithographic industry's labor problems, under the sponsorship of the Lithographers National Association, was held in Chicago February 18th at the Hotel Morrison. The meeting, running through the afternoon and evening, was attended by about 100 persons representing 65 LNA member firms and non-members from Chicago and vicin-

ity. It was for the purpose of discussing lithographic labor relations problems. George E. Loder, president of LNA, presided.

Mr. Loder spoke of the need for close cooperation among lithographers locally and nationally, of the importance of national industry thinking, and briefly covered the need for building better employee relations in individual plants. W. Floyd Maxwell, executive director of LNA, gave an outline of current lithographic labor negotiations and reviewed the situation throughout the country. George A. Mattson who heads the LNA expanded labor relations program, discussed the salient points and objectives of the program. Matthew H. O'Brien, general counsel for LNA, covered the Washington situation in regard to labor, the background of labor negotiations, and the current C.I.O. and A.F. of L. general policies.

After the dinner at six o'clock Dr.

Phillips Brodley, director of the Institute of Labor and Industrial Relations of the University of Illinois, spoke on labor-management relations today. Following the speakers in both the afternoon and evening sessions there were question and answer periods and general discussions of the current problems and trends in labor's demands.

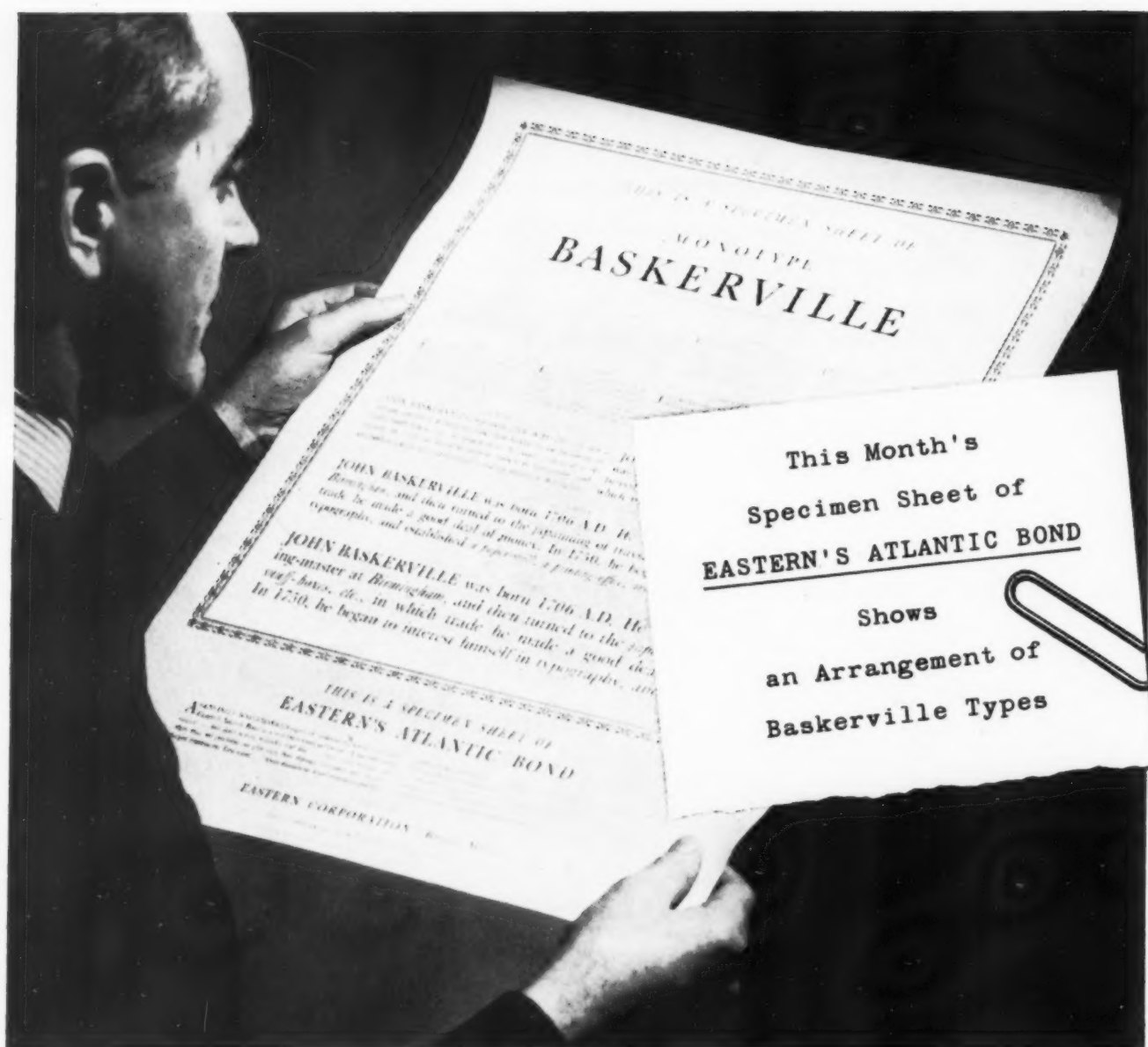
Re-elect Zimmerman

Arthur Zimmerman, Otto Zimmerman & Sons Co., Cincinnati, was re-elected president of the National Music Printers & Allied Trades Association, at the annual meeting held at the Cincinnati Club, that city, February 8, 9 and 10. William R. Teller, Jr., Robert Teller Sons & Dorner, New York, was re-elected vice president; and Victor Tock, E. A. Stege & Co., New York, was elected treasurer. Mr. Tock succeeds Morgan O'Brien, Edward R. Fleming Corp., New York. Gordon McGarry continues as executive secretary. The association's offices are at 1776 Broadway. Membership is composed almost entirely of music lithographers.

Lists Saranac Accommodations

In addition to accommodations at Saranac Inn, in upper New York state, those attending the Lithographers National Association convention in June also will have rooms at cottages the LNA announced. The convention is located two miles from the Saranac Inn station of the New York Central Railroad. Service from New York on the Colonial Airlines also is available.

The convention dates are June 3, 4, 5, and 6, with the final day devoted to the annual golf tournament. Details of the program have not been announced.



DURING the month of March, Eastern Corporation is distributing to printers and buyers of printing a specimen sheet of *Eastern's Atlantic Bond* which is also a specimen sheet of Baskerville type produced by Edwin H. Stuart of Pittsburgh. Because of its clean surfaces, Eastern's Atlantic Bond is particularly adaptable to the fine lines of

this face. Its firm, even texture... its freedom from waves, wrinkles, and lint... its moisture-controlled content and precision-cut edges insure smooth operation on the press with less trouble and waste. A better buy for better results, specify genuinely watermarked Eastern's Atlantic Bond for letterheads and business forms.



EASTERN CORPORATION

BANGOR, MAINE

Makers of Atlantic Bond and Other Fine Papers for Business

Apprentice Courses Open in Philadelphia Program

APPROXIMATELY 60 apprentices were enrolled in the new in-plant apprentice training program launched the first of February at Philadelphia, Elmer Strange, Alpha Litho Co., Camden, general chairman, announced.

Classes and instructors are as follows: Press, held at Dando-Schaff Printing & Publishing Co., Charles Beck and Jack Ryan; Camera, Jos. Hoover & Sons Co., Leo McGinley; Platemaking, Graphic Arts Engraving Co., Charles Work; and Dot Etching, Ketterlinus Lithographic

Manufacturing Co., Arthur Zeiter.

The Philadelphia school is sponsored by the employers and Local 14, Amalgamated Lithographers of America, CIO. Besides Mr. Strange, employer representatives on the central committee include George McGinley, Ketterlinus Company; William Jensen, Dando-Schaff Company; and George Hoover, of the Hoover Company. Union representatives on the committee include Walter Harris, president of Local 14; Miss Julia LaShinn, secretary; Morris Cohen; and Leo McGinley.

New Offset Paper

Another newspaper, produced by offset lithography, made its bow during February in Mayfield, Ky. Titled "News Graphic" it is tabloid size and is produced by a newly formed company, Modern Litho-Printers, 215 S. Sixth St. The company's facilities include a Webendorfer 17 x 22" press and a Davidson 10 x 14", ATF camera and platemaking equipment, a folder, cutter and other equipment.

Farland Robbins is president of the corporation, vice president is Roy D.

Williams, and Slayden W. Douthitt is editor. Directors include Morton M. Webb and Kenneth Wells. "We feel that the paper has gotten off to an excellent start," Mr. Robbins said.

Illinois Group Elects

Officers and directors of the Graphic Arts Association of Illinois were elected recently as follows: Otto E. Bull, Workman Mfg. Co., president; Harry B. Clow, Rand McNally & Co., first vice president;

Howard R. Stone, American Color-type Co., second vice president, all of Chicago; G. P. Freeland, Desaulniers & Co., Moline, Ill., third vice president; and W. H. King, Stationery Mfg. Co., Chicago, treasurer. S. F. Beatty continues as secretary and general manager.

The following directors were elected or continue in office: H. A. Bredemeier, E. W. Bredemeier & Co.; John H. Doesburg, R. R. Donnelley & Sons Co.; Norman B. Jacobson, The Huron Press; H. G. Kable, Kable Brothers Company, Mt. Morris; C. B. Martyn, National Printing and Publishing Co.; P. L. Tallman, Tallman, Robbins & Co.; William H. Barnes, A. R. Barnes & Co.; Paul C. Clovis, The Twentieth Century Press; Fred B. Hamm, Blakely Printing Co.; R. B. Nelson, Magill-Weinsheimer Co.; Charles M. Pearson, Flanigan-Pearson Co., Champaign; Robert Williamson, Calumet Publishing Co.

Palm Bros. Elects

Three new officers were elected recently by Palm Bros. Decalcomania Co., Norwood, Cincinnati, Ohio. They are Charles P. Irion, vice president; Max Palm III, treasurer; and Robert E. Sammis, assistant treasurer. Mr. Irion was Palm's western sales manager 13 years and was elected treasurer in 1939. Mr. Palm is a great grandson of the late Dr. Otto Palm, and has been assistant treasurer since leaving the army. Mr. Sammis, recently discharged from the navy, was previously connected with another firm.

Directors re-elected included Max J. Palm, Jr., also re-elected president; Raymond J. Kunkel, Otto J. Palm, Orlin W. Roesener, also re-elected vice president; Max Palm III, Dennis T. Hackett, and George C. Ludwig, also a vice president. Also re-elected were C. Murray Booth, vice president; Otto Palm, secretary; and Clarence B. Rakel, assistant secretary.

Prak Decal Co. Moves

Prak Decal Co., Chicago, recently moved to 1217 Webster Ave.

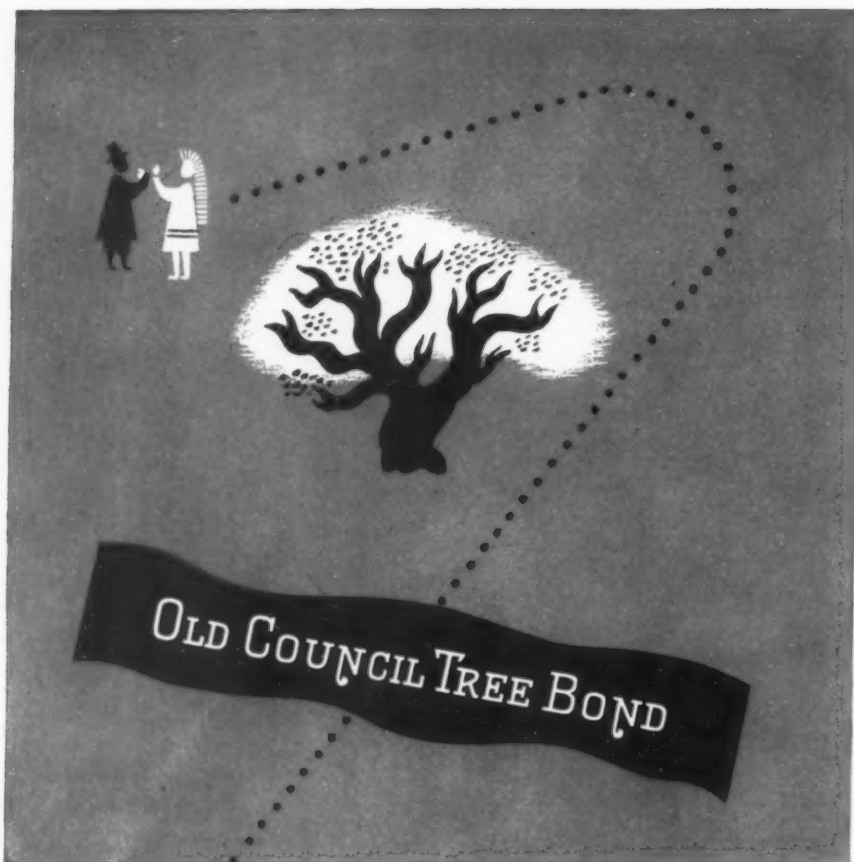


Lawson Handles Die Press; Appoints Andrews

D. W. Schulkind (left), president of E. P. Lawson Co., New York, hands William H. Ware, president, Hobbs Mfg. Co., an order for the first Hobbs die press now at Lawson's show room. Lawson has been appointed exclusive eastern representative for the Hobbs line. The streamlined press is suited for die-cutting envelopes and large labels, and has an overload release to prevent machine breakage. All gears and operating mechanisms are en-

closed. The 24 x 38" size is in full production with deliveries now being made. A 24 x 44" size will be offered soon.

Mr. Schulkind also announced the appointment of Charles M. Andrews (right), who started with the Lawson company as an office boy in 1930, as vice-president. Mr. Andrews will continue to handle the sale of Lawson cutters and other products in the Northeast.



■ The name Old Council Tree identifies the best business and personal paper in the Neenah line. Old Council Tree Bond is made of 100% long cotton fiber stock and possesses absolute permanence. Old Council Tree Bond is ideal for business and personal needs where extraordinary distinction is required . . . and for stock and bond certificates, insurance policies and other important forms subjected to extremely severe handling.



These famous names identify the papers manufactured by the Neenah Paper Company. The name *Neenah* appears in each watermark to identify the genuine for your protection.

OLD COUNCIL TREE BOND
SUCCESS BOND
CHIEFTAIN BOND
NEENAH BOND
NEENAH THIN PAPERS

TUDOR LEDGER
STONEWALL LEDGER
RESOLUTE LEDGER
NEENAH LEDGER
NEENAH INDEX BRISTOL

NEENAH PAPER COMPANY • NEENAH, WIS.

Announce More NAPL Plans

More plans for the four-day convention of the National Association of Photo-Lithographers, planned for October 22-25 at the Book-Cadillac Hotel, Detroit, have been announced by Walter E. Soderstrom, executive secretary. An additional day has been added to the convention to allow visitors more time to study the equipment and supplies on display which is always a feature of this convention, Mr. Soderstrom said. Convention sessions will revolve around the subjects of labor, costs, equipment, production and personnel.

William J. Stevens, NAPL secretary, and president of the National Association of Litho Clubs, announced that the Detroit Litho Club will sponsor the all-day technical sessions on the convention's last day. Harry Rippert, president of the Detroit club is already at work on plans, Mr. Stevens said.

Baker Repro Expands

Baker Reproduction Co. Chicago platemaking firm, recently doubled its space with the acquisition of new quarters at 208 South Jefferson Street. The company has also purchased new equipment, including a 64" Rutherford automatic photo composing machine which was to be delivered in March. The company already operates one Rutherford machine. R. W. Kramer, vice president, reports.

Installs New Press

Lindsey Lithograph Co., Akron, has installed a new Harris 35 x 45" offset press and expected to have it in production on a day and night schedule by the middle of February, Thomas R. Lindsey announced. This brings to three the total offset presses in this plant, he said.

Buys Western Co. Stock

The stock of the estate of the late F. H. Hollow was purchased recently by Otis E. Wells, president and general manager of Western Lithograph Co., Wichita, Kan. Principal company stockholders are now Mr. Wells and Frank Larcher. The company recently has expanded its fa-

cilities, and has added Ivan F. Mahan formerly of General Motors, as regional sales director.

Named to Board



Lee Augustine (above), was elected a director of The Printing Machinery Company of Cincinnati, recently. Mr. Augustine has been vice president of the company since 1939 and continues in that capacity. He has been associated with the company nearly 27 years, starting as an errand boy in 1920. He has been active in associations and other groups within the industry and has spoken at meetings of printers throughout the country.

St. Louis School Expands

Twelve students are now enrolled and at work in the dot etching class which meets for three hours on Monday nights at the Ranken Trade School, St. Louis. A similar class meets on Wednesday nights. A class in litho estimating is now forming and applications have been approved for classes in camera, platemaking, press work and opaquing. All students must be employed by a lithographer and pass the requirement standards of the school. The litho school is sponsored by the Associated Printers & Lithographers of St. Louis in cooperation with the Ranken Trade School.

Fred Zeitz, ALA, Resigns

Fred Zeitz, president of Local 4, Amalgamated Lithographers of America, CIO, at Chicago for the last 21 years, resigned from that office late in February. His resignation is to be effective April 30.

Appoints Herb Kaufman

Stuart E. Arnett, sales manager of the Printing Machinery Division, Electric Boat Co., during February announced the appointment of Herbert Kaufman as advertising and sales promotion consultant. Mr. Arnett also announced the appointment of Gotham Advertising Agency, the parent company's agency for several years, to handle advertising for Willard Offset presses which the division is manufacturing.

Mr. Kaufman has been associated with the graphic arts industry for many years. Prior to the war he was advertising and public relations director for General Printing Ink Corp. (Now Sun Chemical Corp.) which included the direction of the Printing and Advertising Clinics. As a naval officer he was assigned to service in publishing and printing, and following his release was assistant to the president of Ever Ready Label Corp., New York. He is or has been associated with the Litho Club of New York, Young Lithographers Association, Young Printing Executives Club, National Association of Printing Ink Makers, Sales Executives Club and Printing Supply Salesmen's Guild.

The Gotham agency has produced work for Electric Boat Co., which has won attention in the advertising field including annual reports which in 1945 were among the three "best of all industry" and the next year among the two "best of all manufacturers."

U.S.P. & L. Pays Dividend

A dividend of 50 cents per share was declared on common stock of U. S. Printing & Lithograph Co., for payment March 1 to holders of record February 17. A total of \$4 per share was paid on the stock during 1946.

Sleight Appoints Waldman

Sleight Metallic Ink Co. of Pa., Philadelphia, recently appointed Herman Waldman salesmanager of the Philadelphia Ink Division. Theodore T. Toole, president, announced. Mr. Waldman has been with the firm 10 years.

For True Color Reproduction **USE NPC ONE-SHOT CAMERAS**



FAST ACTION

● Catch fast action in color with precision performance.

TRUE COLORS

● Record true colors from the softest pastel to deepest shades.

DIRECT PRINTS

● Reproduce color shots quickly and exactly in your own studio by direct methods.

COLOR-SEPARATION

● Use the three color-separation negatives directly in color reproduction.

Professionals concede that photography with direct color separation achieves highest quality in reproduction...greatest speed in processing...maximum efficiency in color operations.

For the finest in color reproduction, choose NPC One-Shot cameras.

NATIONAL PHOTOCOLOR CORPORATION, NEW YORK 17



Trade Assn. Heads Honor Jos. P. Smith

Joseph P. Smith (third from left) of the N. Y. Employing Printers Assn. is shown receiving an illuminated certificate presented by the Graphic Arts Trade Assn. Executives, in honor of his service to the GATAE which included two years as president, 1944-46. Walter E. Soderstrom, GATAE president, makes the presentation. Looking on are (left) Harold McGirr, Typographers Assn., and (right), Daniel A. McVicker, president, N. Y. Employing Printer's Assn. The GATAE membership now includes 55 secretaries of national and local associations in the graphic arts industry.

Schlegel Corp. Elects

George Schlegel III, was elected president of Schlegel Lithographing Corp. during February, and is the fourth George Schlegel to head the 106-year-old firm. He succeeds George Schlegel, Sr., who became chairman of the board. Jacques J. Tisne, was elected vice president and treasurer, John W. Jacobus was elected vice president, and Agnes H. F. Schlegel was elected secretary.

George Schlegel III has been with the firm 15 years and has devoted his time to administrative and production work. He became corporation secretary in 1934, and in 1946 he was advanced to executive vice president and sales coordination was added to his duties.

Offers Type Specimens

The first of a series of 17" x 22" specimen sheets of type faces and paper from Eastern Corporation, Bangor, Maine, was sent to lithographers during March, the company announced. One specimen sheet each month will display one or more famous type faces, showing its varied applications for beauty and utility. Each sheet was individually designed by one of the country's outstanding typographers, the company says, among whom are the following: Fred Anthoensen, Howard Coggeshall, Edwin and Robert Crabhorn, Charles R. Jaquish, Richard N. McArthur, Frederic Nelson Phillips, Carl Purington Rollins, Edwin H. Stuart, Joseph Thuringer, George F. Trenholm, Kurt H. Volk, and Ben Wiley.

All sheets will be accompanied by

a brief biographical sketch of the typographer, as well as comments on the type face selected.

Some sheets are produced by letterpress, others by offset. The papers themselves vary from bonds to ledgers. "Any recognized lithographer may make request for his individual copies of these specimen sheets, singly or in series as released, from his paper merchant distributing Eastern's Mill-Brand lines of papers," it was explained, "Or he may make a direct request to Eastern Corporation, Bangor, Maine."

Hoe Pays Dividend

The Board of Directors of R. Hoe & Co., Inc., during February, declared a dividend of \$3 per share out of earned surplus as of Sept. 30, 1946, payable March 7, to holders of Class "A" stock of record at the close of business February 27. The Board also declared out of surplus a dividend on the Class "A" stock at the rate of \$1 per share for the quarterly period commencing October 15, 1946.

Wichita Plans Develop

"Forging Tomorrow's Markets" is the theme selected for the Southwestern Graphic Arts Conference, planned for May 8-10 in Wichita, Kan. Sponsors are the Printing Industry of Wichita and the Tri-State Printers Association. Speakers will include Arthur A. Horrocks, of the Flying Squadron sales school, Clyde K. Murphy of Blackwell-Wielandy Co., St. Louis, and Rev. Leo C. Brown, director of the Labor School and of the St. Louis University In-

stitute of Social Sciences. The Conference opens with a golf tournament on May 8, and closes with a technical clinic on Saturday conducted by W. H. Griffin, president of the International Association of Printing House Craftsmen.

Miller Heads Kaumagraph

At the annual meeting on February 25, Thomas H. Miller was elected president of Kaumagraph Company, Wilmington, Del., replacing Trowbridge Marston, whose 20th anniversary as president was recently celebrated. Mr. Marston at the same time was elected chairman of the board. Mr. Miller has been with the Kaumagraph Company since 1926, during which time he has been secretary, treasurer and vice-president.

S. W. Porges, who has been with Kaumagraph Company since 1929, was elected vice-president and in that capacity will continue to direct sales. George S. Reid and Mrs. Elaine P. Murray were elected treasurer and secretary respectively. The officers, with the exception of the secretary, together with James W. Ames, Samuel H. Gillespie, Mrs. Hilda C. Marston and Frederick T. Marston constitute the directorate.

George B. Compton Dies

George B. Compton, 82, chairman of the board of Compton & Sons, Lithographing and Printing Co., oldest lithographing plant west of the Mississippi, died February 12. Mr. Compton was the son of Richard Compton, founder of the firm bearing his name and a pioneer St. Louisan, after whom Compton Avenue in St. Louis is named. Compton entered his father's firm as a youth and served as president for many years until his retirement several years ago.

Joseph R. Bien Dies

Joseph R. Bien, 80, former president of Joseph Bien & Co., lithographers formerly of New York, died recently. Mr. Bien, who retired in 1938, was an engineer and had specialized in map-making.



"xX*#;:/@¢*q....!!!"**

Missed the train? No use cussing! Next time, plan your trip ahead of time: consult the time table—set your alarm clock—get up when it rings!

Trains run on a schedule, and so do the mills of the Falulah Paper Company. If you plan ahead, and advise your customers to do the same on their future needs for Falpaco Coated Blanks, it will be easier for you, and for your paper merchant to take care of their requirements.

PLAN AHEAD...AND YOU'LL COME OUT AHEAD!

Advance planning is necessary because of the growing demand for FALPACO COATED BLANKS. More and more printers and lithographers recognize that their fine color, smooth surface and rigidity results in better offset and letterpress jobs. No wonder, for FALPACO COATED BLANKS have *special coatings* for letterpress and lithography.

Plan Ahead! See your paper merchant!



FALULAH

**PAPER
COMPANY**

DISTRIBUTED BY AUTHORIZED PAPER MERCHANTS FROM COAST TO COAST.

NEW YORK OFFICE—500 FIFTH AVE., N. Y., 18 • MILLS—FITCHBURG, MASS.

Milwaukee to Hold Graphic Arts Conference March 29

MORE than 250 Wisconsin printers, lithographers, engravers and others associated with the industry are expected to attend the second annual Graphic Arts Conference, scheduled to be held in Milwaukee on Saturday, March 29th, according to Arthur Wetzel, president of Graphic Arts Association, Milwaukee. Sponsored jointly by the Graphic Arts Association and the University of Wisconsin School of Commerce, the conference will include the discussion of many subjects of timely interest.

Among the principal speakers will be Don Molitor, director of sales for Edward Stern & Co., Philadelphia. Mr. Molitor will discuss sales problems in a talk entitled: "Selling Is Here Again."

Other topics to be covered at the conference by members of the graphic arts industry and of the University of Wisconsin staff will include safety and housekeeping, costs, job planning, financing, personnel and appren-



Arthur A. Wetzel

tices. There will be an open forum in connection with most of the discussions, and those who attend will have the opportunity to bring up their own individual questions and problems before the gathering. The conference, which will commence at 8:45 A.M. and will continue throughout the day, will be held in the Elizabethan Room of the Milwaukee Athletic Club.

YLA Nominates Hashagen

Fred Hashagen, National Process Co., was nominated for president of the Young Lithographers Association of New York at that organization's February 19 meeting at the Building Trades Club. Other officers nominated included Charles Roberts, Brett Lithographing Co., vice president; Henry T. Birgel, Henry F. Birgel & Sons Co., secretary; and H. M. Selling, Lutz & Sheinkman, treasurer. For the board of governors the following were nominated: Girard L. Urban, John L. Jackson, William H. Falconer, George C. Cramer, Walter J. Ash, and William Glover. Election was planned for the annual meeting on March 12. The Harris-Seybold Co. film, "How To Make a Good Impression" and the new Sinclair & Valentine film "Graphic Arts Marches On" were also to be shown.

The feature of the February meeting was a talk by Thomas D'Addario, designer of packages, labels, and dis-

plays. His subject was "Creation of a Selling Package" and excerpts are published elsewhere in this issue.

Issues Customer Booklet

A booklet for helping customers to prepare copy for photo-lithographic reproduction has just been issued by Spaulding-Moss Co., Boston lithographers, Floyd R. Judd, advertising manager, announced. The booklet, titled "Typing for Photo-Lithographic Reproduction," contains sections on the use of the typewriter for preparing copy, selecting paper, making corrections, spacing, proportion, drawings and photographs, justifying the copy, ruling lines, and assembling the material. Samples of pica and elite typewriter copy are shown at various reductions. The booklet also contains various tables and charts for calculating the number of characters in copy casting. Copy for the booklet was prepared on an Electromatic Proportional Spacing type-

writer, with headings set in regular type, Mr. Judd said. The cover shows the Spaulding-Moss building at 42 Franklin Street.

Plan Point-of-Purchase Tests

A three-point research program to determine effectiveness of point-of-purchase advertising soon will be submitted for sponsorship to the Advertising Research Foundation by the Point-of-Purchase Advertising Institute, Norman McKean, executive secretary, announced recently. The program, already approved by the Display Research Committee of the Association of National Advertisers, involves readership tests, sales effectiveness of window displays and traffic checks. Both home and retail outlet interviews will be utilized.

Mr. McKean also announced that a current drive has increased Institute membership by 53%. May 12th was the date set for the annual membership meeting to be held in New York.

Columbus Firm Re-elects

Robert G. Kelley was re-elected president of the Columbus (Ohio) Bank Note Co. at the company's annual meeting during February. Other officers renamed were Ernest H. Matheny, vice president, and J. Stewart Collins, secretary. Phillip H. Jenkins continues as plant superintendent, C. E. Apel as sales manager, and Paul Williams was named divisional sales manager. Mr. Kelley said that a heavy demand for printing and lithography is continuing and that considerable new equipment has been installed in the plant for increased production of bank stationery and advertising material.

Plan Craftsmen Conference

The annual Spring Conference of the First District, International Association of Printing House Craftsmen is planned for Saturday, April 26 at the Roger Smith Hotel, Holyoke, Mass. An all-day educational program is planned and the conference will be concluded with a dinner dance in the evening.



MORE
PRODUCTION

*Are you groping
for the answer?*

If your problem is how to get more production from your offset department—consult RUTHERFORD on your preparatory processes. Their extensive experience in the manufacture of lithographic equipment such as Photo-Composing Machines, Offset Color Proving Presses and Precision Cameras, enables them to serve your best interests. It matters not whether your needs are large or small, RUTHERFORD service and equipment are available to all.



RUTHERFORD
MACHINERY DIVISION
100 SIXTH AVENUE, NEW YORK 13, N. Y.

Reports Rapid Progress

A story of the success of research in solving wartime shortages was related recently at a meeting of the Rapid Roller Company's national sales organization at the Stevens Hotel in Chicago. At this meeting the company described the achievements of its research chemists and engineers in finding substitute materials to take the place of those unavailable. Many of these materials have proved superior to original materials, it was said.

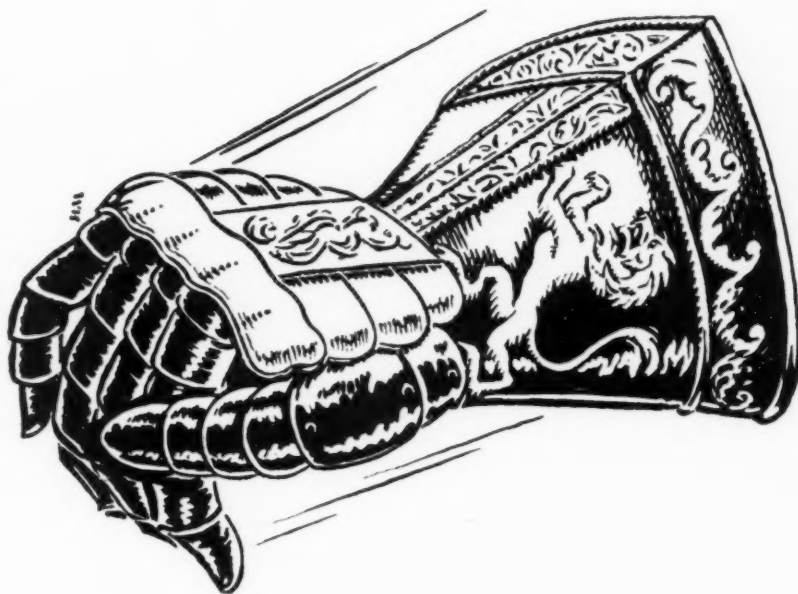
Because of this research effort, D. M. Rapport, president of Rapid Roller, was able to report an excellent sales showing despite the shortages which affected the industry as a whole during the wartime period, the company reports. "Prospects for 1947 are the greatest ever for the graphic arts industry," said Mr. Rapport. "Shortages of materials are diminishing and our customers report sales of printing and lithography are holding up very well. In view of this circumstance, the Rapid Roller Company can look forward to rapidly expanding sales operations during the coming months. Innovations perfected in our laboratories during the past few years can now be made available for the first time to our customers. These broad improvements, plus the sound economic condition of the industry as a whole, spell 'all clear ahead'."

Charleston Man Dies

Harold S. Mathews, 64, president of the Mathews Printing & Lithographing Co., Charleston, W. Va., died February 2 following a heart attack at his office. He was a native of Philadelphia and went to Charleston at an early age. Mr. Mathews was active in political and civic affairs and had served on the city council for 14 years and for three terms in the state legislature.

Grant M. Thomas Dies

Grant M. Thomas, 83, who operated a lithographing company at 217 Centre St., New York, until his retirement 10 years ago, died February 13 at Orange, N. J.



Guardian Throws Down the Gauntlet

As in wartime, Guardian continues to throw down the gauntlet to shortages, difficulties and restrictions that still hamper in the postwar period the production of fine bond, ledger and index paper. Ask for a copy of our new Guardian Bond and Ledger Sample Book, now being distributed. See for yourself how we have held up the quality of 50 percent cotton content, balanced Guardian. When better materials are available, Guardian will be even better than it is now. But the Guardian you buy today is a mighty fine sheet, bond, ledger or index.

GUARDIAN BOND

Manufactured by Crocker-McElwain Co., Holyoke, Mass.

The Guardian Family of balanced papers, bond, opaque, ledger and index, is fabricated for modern production needs, letterpress and offset, and for typewriters and office printing machines.

WE'RE *SPEEDING* PRODUCTION TO SUPPLY THE DEMAND!



LAWSON "38's"
are rolling off
assembly lines!

Every day, more Lawson "38's" are rolling off assembly lines to meet the unprecedented demand for this modern, superior paper cutter. From coast-to-coast, and in Canada too, users agree that Lawson "38" performance surpasses every claim we have made. The Lawson "38" pays off in superior accuracy, increased production, greater safety and extra dependability.

The above photograph is visible proof of how we are keeping pace with demand. Our

stepped up production now assures reasonably prompt deliveries . . . there's a Lawson "38" earmarked for you. Get in touch with our nearest office or distributor today for facts and figures on this revolutionary paper cutter.

Lawson "44" and "50" cutters are also in production and will be available in (1) standard (2) motor controlled back gauge and (3) automatic spacing models.

MAIN OFFICES AND SHOWROOMS

426 West 33rd Street, New York 1, N. Y.

EXCLUSIVE DISTRIBUTORS

HARRY W. BRINTNALL CO., INC., Los Angeles, San Francisco, Seattle
A. E. HEINSOHN PRINTING MACHINERY, Denver, Colo.
TURNER PRINTING MACHINERY, INC., Cleveland, Chicago, Detroit
SOUTHEASTERN PRINTING SUPPLY CO., Atlanta, Ga.
SEARS, LIMITED, Toronto, Montreal, Winnipeg, Vancouver



NEW YORK • BOSTON • PHILADELPHIA

MODERN LITHOGRAPHY, March, 1947

Ohio Metal Plant Moves

The Ohio Can and Crown Co., is now operating in a new plant at 16 St. and Harsh Ave., S.E., Massillon, Ohio, after moving to that location from Canton, Ohio, during January. Ground was broken for the new plant in September, 1945, and the building was completed last year. It contains 85,000 square feet of floor space. The company was organized in Canton in 1933 and now employs about 300 persons. Products include containers for various dry products, waste baskets, lunch boxes, metal tile, and other metal lithographed and fabricated products.

Officials include C. W. Lappin, president; A. P. Richards, vice president and treasurer; C. M. Punch, secretary; John Baugh, sales manager; James R. McCuskey, plant manager; and Warren Freeberger, lithographing superintendent.

J. A. Aull, Sorg., Dies

John A. Aull, 76, chairman of the board of directors of the Sorg Paper Co., Middletown, Ohio, died February 1, following a month's illness from a heart ailment. He became a director of the Sorg Company in 1908 and later was made vice president. He was elected company president in 1914, and during his tenure the company enlarged its activities and purchased several other pulp and paper firms. He had been chairman of the board since 1944. He had been active in civic affairs, and was a director of several other corporations in other industries.

Griswold At NYU

As part of its courses on paper technology New York University will devote its class on May 8 to Paper for Offset Lithography. The evening's presentation will be conducted by Wade E. Griswold, executive director of the Lithographic Technical Foundation.

Installs New Press

A new two-color Harris press was installed recently at the Keeler-Morris Printing Co., St. Louis, and is now in operation.

HAVE YOU SEEN YOUR LATEST ADVERTISEMENT?

**Records are meant to be kept
... FOR A LIFETIME**

GOOD RECORDS are an important element in your business success. Be sure yours will give life-long service... guard vital statistics without dog-eared or splitting under constant handling... eliminate the need for costly re-copying... eliminate the printer for his opinion before you choose any record paper. Because he knows all about the subject we know his recommendation will be

Rising No. 1 Index

- ✓ 100% rag
- ✓ 5 weights
- ✓ White and four colors
- ✓ 2 sizes

When you want to KNOW... go to an expert!

Rising Papers

Ask your printer... he KNOWS paper!

Rising Paper Company, Housatonic, Mass.

OF COURSE you check on all your ads—but here is one that may have escaped your notice. Sure, it appears over the signature of the Rising Paper Company and is designed to sell our products. But remember *our* sales story in *your* sales story. If we can persuade a customer to check with you before ordering paper, we know that with your knowledge of paper and our quality paper that it is more than likely you will recommend a Rising Paper.

**This advertisement appears
in executive, advertising, sales
and sales promotion magazines.**



Rising Papers

PRINTING AND TECHNICAL



UNSURPASSED COLOR WORK

Leading lithographers are leaving their color work with us, confident in the feeling that our staff of experts will turn out an unsurpassed job. We can handle your platemaking requirements, too. Just call or write us.



NEW VULCAN OFFSET BLANKETS



WIN NATIONWIDE ACCLAIM

Lithographers who always thought VULCAN Offset Blankets the finest obtainable are hailing these great blankets as "better than ever in 1947."

Their enthusiasm is justified. "Just wipe it off and it's ready to go" is the way one delighted user puts it.

"Remarkably uniform in thickness" says another. Still another says "I haven't touched my impression setting at all after an unusually long run, with several plate changes."

All this and more is made possible by VULCAN'S unceasing laboratory research. The new 1947 offset blankets embody new concepts of formulation, resulting in "just right" resilience . . . assured uniformity of thickness . . . freedom from embossing and debossing.

For finer quality reproduction, for more impressions without changes, order the new VULCAN Offset Blankets now. You've never used anything so fine.

VULCAN
PROOFING COMPANY
FIRST AVENUE & 58th STREET • BROOKLYN 20, NEW YORK



RED
D
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Excellolith

470



ExcelloLITH

OFFSET BLACK 470

SENSATIONALLY NEW

DIFFERENT FROM ANYTHING YOU'VE EVER USED



Lithographers, after rigid press room tests, praise it highly, highlights and middletones print up sharper than ever before.

Excello-Lith Black makes it possible to print large solids on all kinds of stock without piling too much ink on the rollers, and small reverse type keeps open and scum free, without constant etching with the acid sponge.

The P_H of the fountain solution can be kept higher than average and yet the dampners stay cleaner longer.

Clean, sharp impressions under conditions most favorable to the plate on the press, make long runs of high quality the rule, rather than the exception.

Yes, Excello-Lith Black is streamlined to a "T". It's a distinguished achievement in modern ink making.

A N O F F S E T B L A C K • • • P A R E X C E L L E N

B E N S I N G B R O T H E R S & D E E N E

THE COMBINATION OF A CENTURY OF PRINTING INK EXPERIENCE

PHILADELPHIA

CHICAGO

LOS ANGELES

Joins Kohl & Madden



Phil Shakespeare, Jr., (above), formerly with the Fuchs & Lang Div., in Philadelphia, has been appointed sales representative for the New England territory for Kohl & Madden Printing Ink Co. Mr. Shakespeare was released from the navy recently, where he headed litho units in the Pacific area for over three years. Before the war he spent 12 years in the lithographic industry in the Philadelphia area.

Students From 8 Countries

Men from eight countries are enrolled in the Intensive Course in lithography at the New York Trade School, Dr. D. J. MacDonald, lithographic dean, announced early in March. The enrollees were listed as follows: Carlos A. Torres Acevedo, and Gregorio Bautista, Bogota, Colombia, S. A.; Gines B. Arimany, Guatemala City, Guatemala, C. A.; Ronald E. Beachley, Chambersburg, Pa.; Robert E. Dillon, Garden City, N. Y.; S. K. Fan, Shanghai, China; A. Sultan Ferris, Calcutta, India; Sven I. Jansen, Stockholm, Sweden; Merwin S. Levine, Hackensack, N. J.; Vernon Murray, Montreal, Can.; Kenneth R. Randall, Spencer, Iowa; Edgar B. Rehnke, Nashville, Tenn.; Isachar Shatzkin, New York; and Jorgen Tandberg, Oslo, Norway.

Those who have addressed or will address the class on various phases of lithography include Dr. Anthony George, Sinclair & Valentine Co.; Paul W. Dorst, Lithographic Technical Foundation; William Falconer, Eastman Kodak Co.; Theodore Makarius, Fuchs & Lang Mfg. Co.; Herbert P. Paschel, consultant; Walter Peterson, Consolidated Litho-

graphing Corp.; Harold Nelson, Condé Nast; Ralph Honek, Harris-Seybold Co.; Ken Martin, Harold M. Pitman Co.; A. Stull Harris, Harris-Seybold Co.; Harold Ellis and William Knauf, N.Y. Trade School; and Fred W. C. French, Lanston Monotype Machine Co.

Field trips of the class are to include a two and one-half day trip to Portland, Maine, where students will be guests at the S. D. Warren Co. paper mill; a week at the Eastman Kodak Co. plant, Rochester, for a special course; and tours of Pagano Studios, Brett Lithographing Co., Ideal Roller & Mfg. Co., and Vulcan Proofing Co., all in the New York area.

The course is to end April 25, and may be offered next fall, Dr. MacDonald said.

Packaging Show April 8-11

The AMA Packaging Exposition, sponsored by the American Management Association, now has 95,000 square feet of exhibit space for its 1947 show, scheduled for April 8-11 at Convention Hall, Philadelphia. This is about 50 percent more space than was utilized at the 1946 exposition. Speaking sessions and clinics are scheduled for morning and afternoon of April 8, 9 and 10 with topics covering a wide range of packaging subjects. Information is available from the sponsor, 424 Madison Ave., New York 17, N. Y.

Paper Groups Elect

Reuben B. Robertson, president of Champion Paper & Fibre Co., was re-elected president of the American Paper & Pulp Association, at its annual meeting in New York during the week of February 24. Cola G. Parker, head of Kimberly-Clark Corp., was elected first vice president.

Other paper associations held meetings and elections at the Waldorf-Astoria or at the Commodore during the week and these included the following, together with the president:

Sulphite Paper Mfrs. Assn.: Harold O. Nichols, Crown Zellerbach Corp., chairman.

Salesman's Association of the

Heads Vari-Typer Firm



Ralph C. Coxhead (above) was chosen chairman of the board of directors of Ralph C. Coxhead Corp., New York, manufacturer of Vari-Typer, it was announced February 21. Stuart P. Coxhead, previously executive vice-president, was elected president. William T. Criswell remains vice-president in charge of sales and G. James Farmer continues as vice-president in charge of export. William Dreichler was given the duties of secretary in addition to those of treasurer. All of the above officers, as well as Theodore Pratt, C. Walter Nichols, and Edward Freeman, were reelected as members of the board.

Paper Industry: E. F. Miles, Crocker-McElwain Co., president.

Technical Association of the Pulp & Paper Industry (TAPPI): Worthen E. Brown, Pejepscot Paper Co., president.

Paper Makers Advertising Assn.: Richard A. Faulkner, International Paper Co., president.

Writing Paper Mfrs. Assn.: M. D. Bardeen, Lee Paper Co., president.

Groundwood Paper Mfrs. Assn.: R. O. Warner, Minnesota-Ontario Paper Co., president.

A general optimistic outlook that paper supply and demand would be in balance before the end of this year was expressed in the various sessions of the meetings.

Wm. LaMothe, S & B, Dies

William LaMothe, 49, for 25 years vice president of Snyder & Black, Inc., New York display lithographers, died February 19 at a Brooklyn hospital. A native of Brooklyn, Mr. LaMothe had lived in Little Neck, Long Island, for the last 20 years. He had served in the navy in World War I and was a member of the American Legion.



In litho pressrooms all over the country Kohl & Madden Inks help turn out quality jobs quickly and economically. Their superior working characteristics and fast, hard drying mean speedier production. Their superior color strength, density, coverage, and sharpness give every job a "quality look" that brings in repeat orders and new customers.

Our nearest office is at your service to provide the right ink for every job.

Specialists in 4-Color Letterpress and Offset Inks

KOHL & MADDEN PRINTING INK CO.

New York City—636 Eleventh Ave.
Buffalo 3—501 Washington St.

Chicago 6—1132 S. Jefferson St.
Detroit, Michigan

COLOR — Motive Power of the Printed Word

LITHO CLUB NEWS

Dayton Hears Dr. George

Dr. Anthony George, Sinclair & Valentine Co., New York, addressed the Dayton Litho Club at its February meeting at Suttmiller's Restaurant. Dr. George who is a lithographic research chemist, spoke on the progress being made in lithographic platemaking techniques. He emphasized the need for accurate control of materials in platemaking. "It is essential to know the conditions within each individual plant to obtain the best possible results in making good offset plates," he said. The 35 members and guests carried on an extensive question period following the talk.

For the March meeting 26 members and guests toured the Aetna Paper Co. mill at Dayton. C. Fred Burtanger of the club and John Minch, Aetna general manager, arranged the affair. A question period was conducted by K. P. Geohegan, vice president and technical director of the paper firm. A dinner at Suttmiller's Restaurant followed.

The next meeting is planned for Monday, April 7 at the restaurant when Paul W. Dorst, technical representative of the Lithographic Technical Foundation will speak on plate graining.

Members recently added to the club's roster include: Armand DeBard, Standard Register Co.; Ingram Rodgers, National Cash Register Co.; Edward Bode, Standard Register Co.; Fred Rost, and Arthur Weber, Drury Printing Co.; Arthur Ballantine, Rapid Roller Co.; and Jack Heim, Otterbein Press.

Over 200 At Oyster Roast

The oyster roast put on by the Litho Club of Baltimore drew over 200 club members and guests February 15. The roast was held at Beyer's Grove, Md., and was arranged by Ed Steinwedel, Crown Cork & Seal Co. Tom Bowden, Vulcan Proofing Co., was co-chair-

man. Delegations from Philadelphia and Washington were also on hand.

John Kronenberg, manager of the offset paper division of S. D. Warren Co., Boston, was scheduled to address the club at its March 17 meeting at the Park Plaza. Mr. Kronenberg was to discuss the present paper situation and the outlook for paper demand, supply, quality and price.

Harvey Glover, Sweeney Lithograph Co., Belleville, N. J., past president of the International Association of Printing House Craftsmen, is to be the speaker at the April 21 meeting.

Mack At Detroit

Norman A. Mack, technical director for Roberts & Porter, Inc., was scheduled to speak at the March 13 meeting of the Detroit Litho Club, R. B. Bivens, club secretary, announced during February. Mr. Mack was expected to tell of some of his experiences as a lithographic trouble shooter. The club meets at Carl's Chop House, 3020 Grand River.

At the February 13 meeting 56 members and guests attended to hear Kenneth McQueen, of McManus, John & Adams, Inc. speak on "Offset Lithography as I See It." He gave an advertising agency viewpoint of lithography.

N. Y. To Hear Bruno

Michael H. Bruno, supervisor of lithographic research of the Lithographic Technical Foundation at the Armour Research Foundation, Chicago, is to speak on bi-metallic plates at the March 26 meeting of the Litho Club of New York, at the Building Trades Club. At the same meeting nine new members will be installed, Larry Littman, National Process Co., club president, announced. They are:

Arthur H. Feth and Charles Roberts, both of Brett Lithographing Co.; William Weinstein, D'Arcy Printing & Litho. Corp.; John C.

Heim, Kindred-MacLean & Co.; Otto Z. Scheerer, Commercial Decal, Inc.; Richard Wenzler, Advance Metal Litho; Stuart E. Arnett, Printing Machinery Div. Electric Boat Co.; Eugene Sannuto and John W. Payne, both of L. H. Philo Corp.

The Astor Gallery of the Waldorf Astoria Hotel was the scene of the New York club's annual dinner dance. Over 250 members and friends of the club attended this February 22nd affair. A large delegation from Philadelphia was on hand to join in the festivities.

Ted Broadston, Vulcan Proofing Co., chairman of the party, introduced guests from Philadelphia, Washington and Baltimore.

Hears Photogelatin Talk

The photogelatin screenless printing process, from original copy to the finished reproduction, was described in some detail by Murray Graubard to about 85 members and guests of the Washington Litho Club, Feb-25, at Hotel 2400. Mr. Graubard, who is production manager of the Photogelatin Division of Consolidated Film Industries, Fort Lee, N. J., said that his process has much in common with photo-lithography, but is not as common, there being only about 12 plants in the U. S. In the process, grained aluminum plates are exposed through sheet film continuous tone camera negatives up to 40 x 60". Plates are coated with a gelatin and bichromate solution about .001" thick. After exposure the unexposed coating is washed out and the plate is soaked in a solution of glycerine and water causing a slight controlled swelling which makes possible printing from the plate.

Plates are placed on direct rotary presses and makeready often requires two and one-half hours or longer. Practical production runs at about 1200 per hour, he said. Plates will last from 5,000 to 10,000 impressions. Multiple color work is produced by the process and in this particular plant much of the color separation work is done by hand on duplicate negatives.

Paper is thoroughly seasoned and humidity in pressrooms is carefully

Fine
PAPERS

for
GREETING CARD PUBLISHERS
LITHOGRAPHERS
PRINTERS AND CONVERTERS



PAPER SALES CORPORATION

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controlled. Moisture is sprayed on the plate while it is running.

The process is especially suitable for displays, broadsides, posters, etc., in short runs, and might be said to fill the requirements somewhere between the short runs of photo prints and the long runs of lithography, he explained.

John Kronenberg, head of the offset paper division of S. D. Warren Co., Boston, is to be the speaker at the club's March 25 meeting at the same place. Dr. Anthony George, Sinclair & Valentine Co., will be the speaker at the April meeting and Commander Donald B. McMillan, noted arctic explorer and lecturer will be the speaker in May.

New members announced included John J. Guthrie, Richard M. Brown and Charles E. Donohue, all of Guthrie Lithograph Co.

A return bowling match with Baltimore was scheduled for March 15 at Washington. The first match at Baltimore February 8 was won by Washington five games to four.

On April 1 the Capital club's directors are to be guests at the home of Mr. and Mrs. John Laverine for the annual spaghetti dinner.

Cincinnati Hears Grunder

Al "Doc" Grunder, International Printing Ink, addressed the Cincinnati Litho Club February 11 on "Lithographic Inks — Problems and Cures," and discussed many of the newer pigments and vehicles used in inks. He also gave practical explanations regarding troubles encountered every day in lithographic production and suggested ways of meeting them. A lively discussion followed the talk, under the chairmanship of Frank Petersen, Cincinnati Lithographing Co., educational chairman.

New members of the club include Norman Thye and Max Birie, of Palm Bros. Decalcomania Co.; William Staudt, Young & Klein; and Russel Esberger, The Hennegan Co.

The club's next meeting was scheduled for March 11. The meetings are held at Dan Tehan's Restaurant.

Phila. Hears Challenger

V. Winfield Challenger, director of printing, N. W. Ayer & Son, Philadelphia advertising agency, on February 24, told the Litho Club of that city why he likes the graphic arts industry and why lithography and printing is a good business. Mr. Challenger, who started working at printing at the age of 12 for \$1 a week, says he likes the security the industry offers. He pointed out how Linotypes, multicolor presses and other types of equipment were opposed at first because it was believed that they would throw men out of work. They have increased the number of jobs, instead, he said, and have made possible the scope of today's printing. He said there are now 650,000 persons employed in the graphic arts and the average salary is over \$3,000 per year.

Other phases of the industry which he likes are the challenge of improved reproduction, for better techniques and greater production. He said that printing with a three-dimensional effect is now in the offing. The spiritual values which come from pleasure in doing good work is another phase which he named. The business has no place for lazy persons, but caters to those who want to work, he declared.

To Honor Past Presidents

Past presidents of the Connecticut Valley Litho Club will be honored as a feature of that club's meeting, Friday, April 4, at the City Club, Hartford, Frank Poll, Meriden Gravure Co., club president, announced.

G. L. Erikson, Braden-Sutphin Printing Ink Co., Cleveland, is to address the club that night on the general subject of ink and color.

St. Louis Sees Film

One hundred persons attended the February 6th meeting of the St. Louis Litho Club, to see the showing of the Harris-Seybold Co. movie, "How To Make a Good Impression." This was an open meeting. The next meeting was scheduled to be March 6 and was for members only.

Chicago-Milw. to Bowl

A bowling tournament between the Lithographers Club of Chicago and the Milwaukee Litho Club is scheduled to be held at the Chicago Arena, Saturday afternoon, April 19, William N. Julin, of the Chicago club announced. Following the bowling matches, dinner and entertainment will be held at the Furniture Club. Elmer Schmalholz, Chicago Planograph Co., club secretary, has charge of tickets for the affair.

LITHO CLUB GUIDE

BALTIMORE

T. King Smith, Secy.
1613 Holbrook St.,
Baltimore, Md.
Meets 3rd Monday, Park Plaza.

CHICAGO

Elmer Schmalholz, Secy.
Chicago Planograph Co.,
517 S. Jefferson St., Chicago 7.
Meets 4th Thursday, Bismarck Hotel.

CINCINNATI

Louis Weiss, Secy.-Treas.
Progress Lithographing Co.
Main Street
Reading, Cincinnati, Ohio
Meets 2nd Tuesday, Dan Tehan's Restaurant.

CONNECTICUT VALLEY

Roger Bartlett,
Meriden Gravure Co.
Meriden, Conn.
Meets 1st Friday, March, May, Sept., Nov., and
sometimes other months, City Club, Hartford.

DAYTON

Harold W. Holland, Secy.
1112 Kemper Ave., Dayton 10.
Meets 1st Monday, Suttmiller's Restaurant.

DETROIT

R. B. Bivens, Secy.
12745 LaSalle Blvd.
Huntington Woods, Mich.
Meets 2nd Thurs. at Carl's Chop House.

MILWAUKEE

Howard C. Buchta, Secy.
E. F. Schmidt Co.
341 N. Milwaukee St., Milwaukee.
Meets 4th Tuesday at the Boulevard Cafe.

NEW YORK

Gerald L. Urban, Secy.
Brett Lithographing Co.
Skillman Ave. & Pierson Pl.
Long Island City 1, N. Y.
Meets 4th Wednesday, Building Trades Club,
2 Park Ave.

PHILADELPHIA

Joseph Winterburg, Secy.
622 Race Street,
Philadelphia 6.
Meets 4th Monday, Poor Richard Club, 1319
Locust St.

ST. LOUIS

Harold Rohne
Letterhead & Check Corp.
2940 Benton St.
Open meetings in Feb., April, June and Aug.

SAN FRANCISCO

Wm. Fennone, Temp. Secy.
Lehmann Ptg. & Litho. Co.
2667 Greenwich St.
San Francisco, Calif.

TWIN CITY

N. Henry Eriksen, Pres.
4117 Upton Ave., South
Minneapolis 10, Minn.
Meets last Thursday of month.

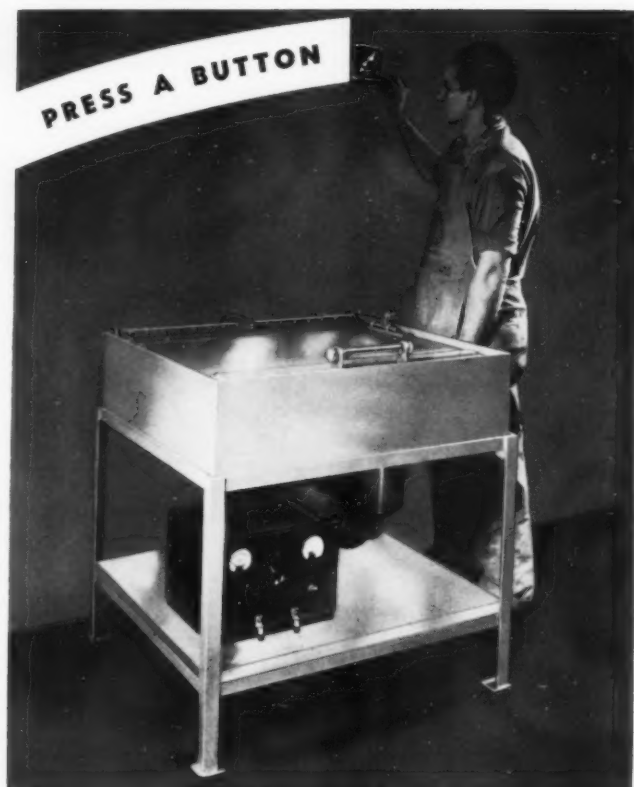
WASHINGTON

John Davis, Secy.
Guthrie Lithograph Co.
1150 First St., N.W.
Meets 4th Tuesday, Hotel 2400 (N.W. 16th
St.)

NAT'L. ASS'N. OF LITHO CLUBS

Ken O. Bitter, Secy.
523 Wilton Road,
Towson 4, Md.

THIS IS ALL YOU DO



TO MAKE AN INTAGLIO PLATE DIRECTLY FROM NEGATIVES

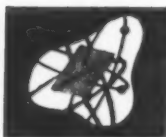
Prepare and coat plate with bichromated albumen or any other negative coating. Expose as usual in vacuum frame or composing machine. Apply any deep-etch type lacquer and dry. Apply developing ink and dry. Develop-out under water as usual, making corrections or additions in regular manner. Place in ELECTRON LITHOPLATE APPARATUS, close cover. Press button to start the automatic two-minute operation. Remove from apparatus, rinse, etch (desensitize) and gum-up. Plate is now ready for press.

The ELECTRON LITHOPLATE PROCESS, based on time-tested electrolytic principles is regulated to deposit .0001 inch per minute of 99.9% pure zinc on your albumen zinc plate. Because of its high degree of purity, perfectly oxide-free, hygroscopic nature and porous condition, scumming and tinting in the plate are eliminated, less than 50% of the amount of

dampening moisture heretofore used is required, and milder fountain acids can be used. The printing image is unaffected by the ELECTRON action. The lacquer and developing ink provide sufficient insulation to prevent any deposit of metal, which builds up all around the finest dot, maintaining faithful reproduction of dots and lines to within one-one-hundred-thousandth of an inch. The ELECTRON action builds up the non-printing area and causes the printing image to become recessed below the surface. This eliminates ink roller, dampener and blanket abrasion, increases plate life 300 to 400% and provides an actual well that makes possible the transfer of up to twice the amount of ink.

ELECTRON intaglio plates can be stored indefinitely and regrained exactly as any other intaglio lithographic plate.

Watch for Our Announcement Soon
About
BI-METALLIC PLATES



PROCESSES AND APPARATUS
PATENTS PENDING

Electron Lithoplate Corporation

Exclusive Distributors

J. H. & G. B. SIEBOLD, INC.

PRINTING INKS LITHOGRAPHIC

47 WATTS STREET

NEW YORK, 13, N. Y.



EQUIPMENT & BULLETINS

New Transparency Viewer

The Macbeth Arc Lamp Company has announced a new color transparency viewer known as the "Chromocritic", designed to register and reproduce specified color temperatures and light intensities within commercial tolerances. The Chromocritic incorporates two different color temperature light sources which are blended together, producing an available variation in color temperature between 2600 and 8000 degrees Kelvin with light intensities up to 1500 foot candles.

A standard meter mounted on each viewer makes possible recording and resetting at specific and desirable illumination required for each color transparency. Masks are available for each size transparency. The viewing area is 12" x 12".

This viewer affords the first variable standard unit for color transparency reproduction, the company claims. Further information is available from Macbeth Arc Lamp Company, 875 North 28th Street, Philadelphia 30, Pa.

R & P Handles Paper Wrap

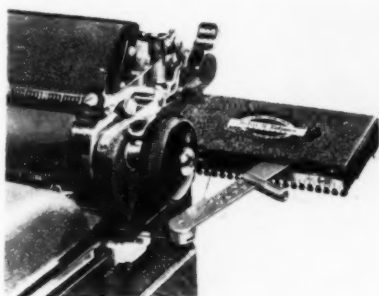
The new Aquastop M-V Bar envelopes for controlling humidity in skids of paper are now being distributed exclusively by Roberts & Porter, Inc., Harry Grandt of the company announced during February. Information on the new material, which is placed over skids of paper to control moisture content, is available from Roberts & Porter offices at New York, Chicago, Detroit and Boston, Mr. Grandt said.

New Layout Book

A revised and enlarged edition of "101 Roughs" by Don May, has been published by Frederick J. Drake & Co., 600 West Van Buren St., Chicago 7. The book, hardbound, 112

pages, in a square format, 8 x 8, contains over 120 illustrations, and a complete showing of eight fundamental type families and eight modern scripts. Each progressive step from the conception of an advertisement to the final printed advertisement is outlined. The book is priced at \$4.00.

Announce Justifying Device



The Edison Margin Justifier, a device which it is claimed can be installed on any standard typewriter to produce copy justified on both left- and right-hand margins, has been announced by Justifier Sales Co. The device will either condense a line or expand it without the use of half spaces or skipped spaces, the manufacturer says. Readers of MODERN LITHOGRAPHY may obtain further information from the company, 2022 Glendale Blvd., Los Angeles 26, Calif.

U. S. Envelope Reports

Sales of the U. S. Envelope Co., Springfield, Mass., for 1946 were 1.3 percent above those for 1945 according to the company's annual report just issued. This compared with a 6.5 percent decrease in 1945 from the previous year. Profits for 1946 were \$1,146,485 after charging \$271,957 for depreciation on buildings, machinery and equipment, and after provision for Federal income taxes of \$720,000. The company has 13 plants, operating under various division names, in cities from coast to coast.

The annual report is a 8½ x 11" eight-page brochure in two colors.

To Publish Art Book

"Work for Artists" is the title of a book to be published by the American Artists Group, 106 Seventh Ave., New York, which will deal with the use of the work of fine artists in advertising and industry. Contributors to the book include Ernest Elmo Calkins, exponent of art in advertising; Charles T. Coiner, N. W. Ayer & Co.; Egbert Jacobson, art director, Container Corp. of America; Reeves Lewenthal, Associated American Artists; Thomas Hart Benton and Rockwell Kent.

Anso Color Price Drops

A slash in the price of Anso color sheet filming ranging up to 33 1/3 percent was announced early in March by E. Allan Williford, General Aniline & Film Corp. in charge of the Anso Division. Reductions cover both outdoor and tungsten type in sizes from 2¼ x 3¼" up to 8 x 10". Mr. Williford credited increased production with making possible the price reductions and said it was part of the company's policy of making color photography increasingly available to the public.

Die Cutters Manual

A Die Cutters Manual, recently issued by Accurate Steel Rule Die Manufacturers, New York, has met with an unexpected demand, the company reports, and over 5,000 copies have been distributed. The manual was issued during the latter part of 1946 after an investigation by M. Lee Scott and E. K. Scott, partners of the company, failed to reveal much printed material on the subject of die cutting.

The manual, titled "Shaping a Better Future" covers many aspects of die cutting of interest to lithographers.

THE IMPORTANCE OF LITTLE THINGS



The Telescope was a development of Jan Liperchy of Middleburg, Holland, in 1603 A.D. Like many great discoveries it was by accident. It was his apprentice who while examining a lens, focused it on a distant church steeple and noticed that the steeple seemed closer and larger.

While the telescope today is mechanically the same, it is infinitely improved. Modern machining and lens grinding make the difference.

Lithography, too, is benefiting by precision grinding and machining. Consider your VULCANIZED OIL or RUBBER ROLLERS—they are machined by BINGHAM to closer tolerances than ever before. This makes possible closer setting of rollers, better results and better reputation for you.

Try BINGHAM BROTHERS COMPANY'S LITHO ROLLERS and see the improvement that only a few one thousandths of an inch can make.

BINGHAM BROTHERS COMPANY

Main Office 406 Pearl St., New York 7

Baltimore, Md

Newark, N. Y.

Rochester, N. Y.

Philadelphia, Pa.

ful. The booklets are offered without charge.

During February Accurate installed music in its plant for employees, and a new group insurance plan has been in effect since the first of the year.

The firm is located at 22 West 21 St., New York 10.

Offers Dyes, Removers

Nutran retouching dyes and retouching dye remover are described in a folder issued by Graphic Process and Products Corp. The retouching dye is available in a neutral grey and a red stain. The dyes are for use in retouching continuous tone negatives or positives. The folder lists the following characteristics: they are fast to light, they penetrate into the emulsion, they do not change color, and the dyes lay smoothly.

The dye removing compound permits the removal of the retouching dyes for correction purposes. The compound is used in a water solution. The folder which describes these products and explains their use is available from the firm at 5 Beekman St., New York 7, N. Y.

Offers Prosperity Posters

A set of four posters entitled "Prescription for Prosperity" designed and produced by National Process Co., New York, is now being offered free to industry in general with the idea of promoting industrial harmony, George E. Loder, president of National Process, announced in February. They are not offered as "propaganda to induce employees to act in the interest of management and owners, but rather as objective education in its truest sense, without which employees cannot act intelligently and realistically even in their own interest," Mr. Loder said. The posters are 12 x 19" and are lithographed in brown and blue.

John B. Van Cleft Dies

John B. Van Cleft, treasurer of the Eureka Specialty Printing Co., Scranton, Pa., died January 13, the company announced during February.

Appoints Gould

Harry Gould, president of Reinhold-Gould, Inc., during February was appointed a member of the special New York Peace Memorial Committee, by Borough president of Manhattan, Hugo E. Rogers. The committee will determine the form the War Memorial will take and the site for its erection. Among those serving with Mr. Gould are: Mrs. Eleanor Roosevelt; Franklin D. Roosevelt, Jr.; Edward Corsi, State Industrial Commissioner; Whitelaw Reid, president, New York *Herald Tribune*; and others.

Open House in St. Louis

More than 1,500 persons in the printing industry in the St. Louis area were invited to an open house March 26-28 at the American Type Founders Sales Corporation's branch, 2135 Pine Street. Ned Rudolph, manager, said the latest models of printing equipment and supplies will be shown the visitors.



Visits St. Louis Plant

Fourteen college students, representing Missouri, Iowa, Kansas, Illinois, Washington and St. Louis Universities, were guests February 28 of the Associated Printers & Lithographers of St. Louis, when they toured the graphic arts industry in that city. The students are shown above as they visited the

Announce Offset Book Judges

The judges for the 1947 contest of Books by Offset Lithography, Inc. were announced March 3 by A. Albert Freeman, executive director, as follows: Arthur Thompson, publications production manager of Bell Telephone Laboratories; George T. Bailey, vice president and treasurer of Photogravure and Color Co.; Edward F. Blechta, vice president and manager of New York Office Magill-Weinsheimer Co. of Chicago; Larry June, June and Osborn; Boris Artzybasheff, free-lance designer and illustrator working with *Life*, *Time* and *Fortune* magazines; and Miss Helen Gentry of Holiday House.

The judges have started their work in selecting the outstanding books produced by offset lithography during the year 1946, and were expected to submit their decision by March 15th. Announcement will soon be made of selected books and the date of the opening of the New York exhibition in May.

plant of George D. Barnard Co., lithographers and steel die cutters. The group, all winners of awards in an advertising contest sponsored by the St. Louis Advertising Club, spent a week in St. Louis.

At extreme left is Fred E. Winsor, executive vice president of the AP & L, next is Lew B. Case and George B. Gannett of the Barnard Company.

SOLUTION

No. 2
STOPPING-OUT SHELLAC



SOLUTION

No. 3
DEEP-ETCH DEVELOPER



**LET YOUR LEFT HAND
KNOW WHAT YOUR RIGHT HAND NEEDS
...AND THEY'LL BOTH REACH FOR SINVALCO**

... For example—Solution No. 2—A superior stopping-out shellac, which brushes freely, producing a uniform film highly resistant to developer and deep-etching solutions... And SINVALCO No. 3—A deep-etch developer designed to penetrate unexposed areas quickly and produce a cleancut stencil, leaving no trace of gum on the metal... SINVALCO Technicians are on call at any time to demonstrate in your own plant the many advantages of using SINVALCO Standardized Chemicals.

SINVALCO
Ready to Use
STANDARDIZED
CHEMICALS

- SINVALCO Solution No. 1
Deep-Etch Coating Solution
(Ready Mixed)
- SINVALCO Solution No. 1
(A and B)
Deep-Etch Coating Solution
- SINVALCO Solution No. 2
Stopping-Out Shellac
- SINVALCO Solution No. 3
Deep-Etch Developer
- SINVALCO Solution No. 4
Deep Etching Solution for Zinc
- SINVALCO Solution No. 5
Deep Etching Solution for Aluminum
- SINVALCO Solution No. 6
Lithotine Concentrate
- SINVALCO Solution No. 7
Deep-Etch Lacquer
- SINVALCO Solution No. 8
Developing Ink
- SINVALCO Solution No. 9
Lithotine Asphaltum
- SINVALCO Solution No. 10
Stabilized Albumin Solution
- SINVALCO Solution No. 11
Litho-Kleen Concentrate
- SINVALCO Solution No. 12
Plate Etch for Zinc
- SINVALCO Solution No. 13
Plate Etch for Aluminum
- SINVALCO Solution No. 14
Fountain Etch for Zinc
- SINVALCO Solution No. 15
Fountain Etch for Aluminum
- SINVALCO Solution No. 16
Stabilized Gum Solution
Lithotine

**SERVICE
FROM COAST
TO COAST**

Sinclair and Valentine Co.

Main Office and Factory: 611 West 129th Street, New York City

Albany Birmingham Charlotte Cleveland Dayton Havana Kalamazoo Los Angeles Mexico City Nashville New Orleans San Francisco
Baltimore Boston Chicago Dallas Detroit Jacksonville Kansas City Manila Miami New Haven Philadelphia Seattle

N. Eng. Meet Mar. 31, Apr. 1

The third annual New England Conference for the Graphic Arts is planned for Monday and Tuesday, March 31 and April 1, at Hotel Statler, Boston, and plans include business sessions, clinics, luncheon meetings and a banquet. The conference opens on Monday with a luncheon, followed by a series of clinics on selling. A banquet will complete the first day's program.

The Tuesday morning sessions will be devoted to production and costs, and the conference will end with a luncheon co-sponsored by the Boston Advertising Club.

Robert Whidden, Rand Avery-Gordon Taylor, Inc., is general chairman of the conference, and the executive committee includes Carlton M. Strong, Ralph J. Waite, William S. Law, Edmund J. Shattuck, A. V. Howland, H. S. Patterson, Philip J. McAteer, Herbert Stevens, and A. J. Bailey.

Hold Coast Art Show

The Second Annual Exhibition of West Coast Advertising Art was held at Barker Bros., Los Angeles, February 11-21, and over 300 pieces of advertising art produced on the west coast were displayed. These were selected from over 1,400 entries.

"50 Leaders" On Coast

The first west coast showing of the 50 Leaders of Direct Mail Advertising was held during January at the Biltmore Hotel, Los Angeles.

Chicago Agrees on 37½ Hrs.

An agreement on a 37½ hour week and wage increases ranging up to \$9 per week was reached by Chicago lithographing employers and Local 4, Amalgamated Lithographers of America, CIO, but at presstime, the agreement had not been approved by the ALA international. The local agreement provides for a further reduction to a 36¼ hour week effective August 1.

J. A. Want Dies

J. A. Want, 56, president and founder of the J. A. Want Organization, Inc., New York, lithographer

and lettershop, died February 8. He had been in ill health for two years. Mr. Want founded the company in 1923 and had been in the graphic arts industry for 35 years. Offset equipment was installed about 12 years ago.

PAPER PROBLEMS

(Continued from Page 57)

pass fairly rapidly across both sides of the entire sheet.

If it is necessary to increase the normal capacity of a conditioning machine temporarily, extra help should be put on, the blowing air raised in moisture content and the conditioning time reduced. Never try to increase capacity by overloading. Maintain one tenth of an inch clearance to a sheet if possible.

In order to have the blowing air at a higher relative humidity than the air in the shop, it is, of course, necessary to have an enclosed machine and a means of injecting extra moisture into the air.

Check THESE OUTSTANDING ADVANTAGES OF "33" INK CONDITIONERS!



- ✓ It increases the affinity of ink to paper.
- ✓ Permits ink to print readily on hard finish stocks.
- ✓ The purging action of "33" keeps halftones clean and open.
- ✓ Added to inks for rubber plate printing, it assures sharp impressions without squeeze.
- ✓ Unexcelled for gloss inks and overprint varnish. It prevents too rapid drying on the press.
- ✓ "33" aids trapping of process and label inks in multi-color printing.
- ✓ Prolongs roller life. Repels moisture and stickiness.



Opportunities for Distributors

Re-alignment of territories has created a few openings for dealers and jobbers. Write for complete details of our liberal proposition. Once sold, "33" is always used. Get the facts NOW.

Ask for a free copy of "TO THE PRESSMAN" which lists all the features and advantages of "33" Ink Conditioners for letterpress and offset printing.

8-LB. TRIAL ORDER

See your local dealer or jobber—or write direct for an 8-lb. trial can. If "33" does not satisfy you completely, return the unused portion at our expense. Specify "33" for letterpress and "O-33" for litho and multilith.

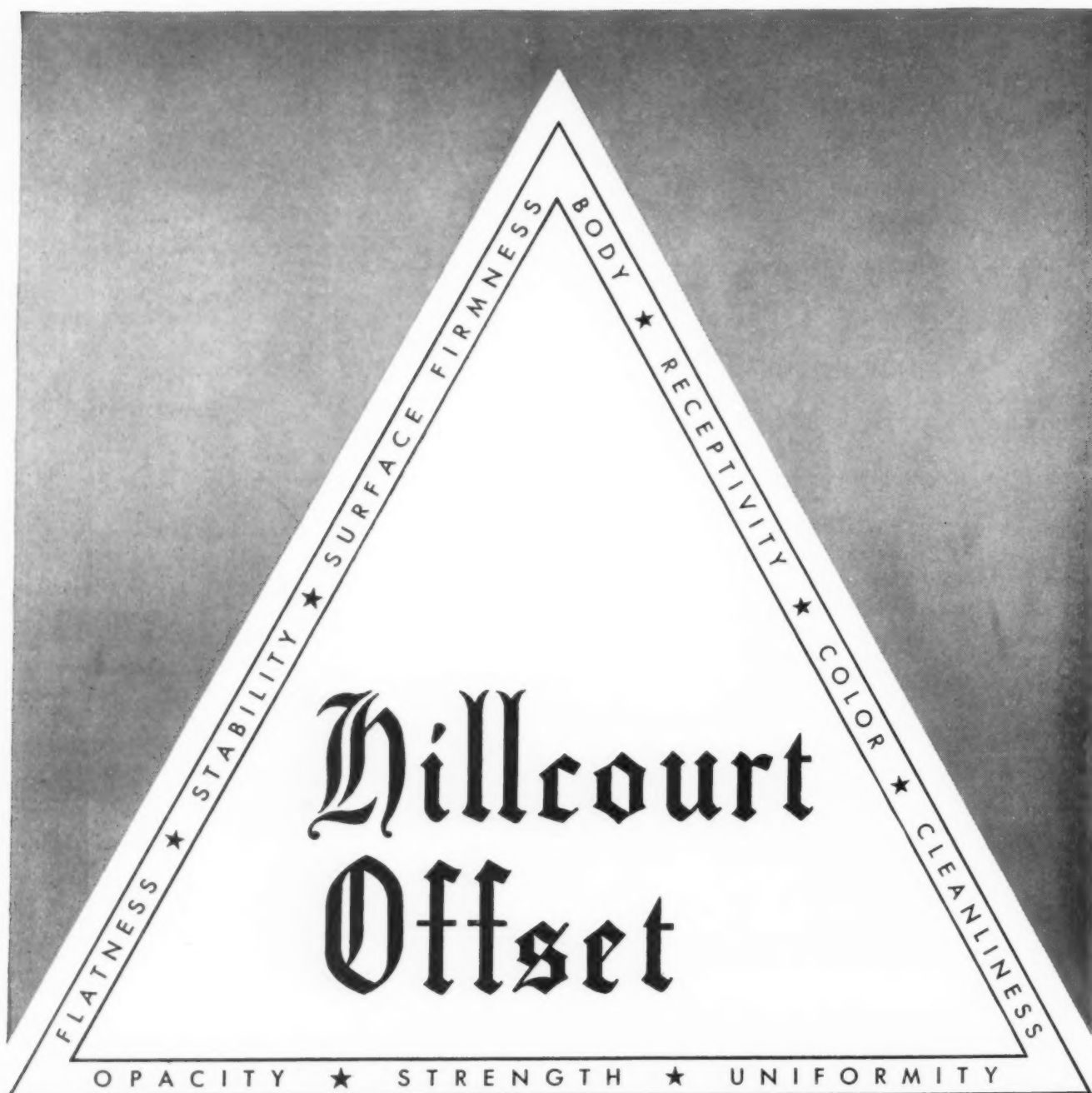
100%
Guarantee

Central

COMPOUNDING COMPANY

1718 North Damen Avenue, Chicago 47, Illinois

IN CANADA—It's CANADIAN FINE COLOR CO., LTD., TORONTO
Export Division: Guiterman Co., Inc., 35 South William Street, New York 4, N. Y.



Fitchburg Paper Company

FOUNDED IN 1861

MILLS AND MAIN OFFICE: FITCHBURG, MASS. N. Y. OFFICE: 250 PARK AVE., N. Y. 17 • 11 SO. LA SALLE ST., CHICAGO

Static

Static is an electrical charge that is built up in a material through friction which gives that material a magnetic attraction for like materials or in some cases vastly different materials. Static can be caused by running paper which is colder than the pressroom. In winter especially, care should be taken to be sure that the paper has reached normal pressroom temperature before attempting to print. Sometimes there will be "Monday morning trouble" if the normal pressroom temperature was not maintained over the weekend. No more than this needs to be known about static in order to eliminate it in the lithographic process, except that it can be bled out of paper by certain methods of grounding the charge or by bringing the paper into an area charged by high voltage, high frequency alternating current.

One trouble caused by static is difficult feeding. If the paper is already charged when in the feeder pile, some difficulty will be experienced in separating the sheets uniformly and

feeding them accurately to the guides.

Another difficulty is in getting the sheets to jog evenly. As each succeeding sheet is delivered to the pile, it immediately establishes such intimate contact with the pile that it is impossible to move it into position with the jogging boards.

This condition of intimate contact squeezes the air out from between the sheets and causes two more troubles. Without sufficient air, trapped between sheets, slow drying occurs. Intimate contact between sheets plus slow setting of the fresh ink causes offsetting on the backs of the sheets.

Static may be greatly reduced by various methods of static elimination devices, but when the paper is very dry it is difficult to make the electrical charge bleed away. The best method is to have a reasonably moist atmosphere in the pressroom, namely, 40% to 50% R.H., and then see that the paper is in moisture equilibrium with this atmosphere. The static will then bleed off to the metal parts of a properly grounded press.

Conclusion

As has been pointed out, the majority of our paper troubles are due to improper handling of this material rather than faults with the paper itself. Even when paper is substandard there are ways in which the lithographer can ease the situation.

It must also be remembered that certain compromises have to be made in the manufacture of paper. For instance, high gloss cannot be accompanied by good air trapping and strong papers are generally quite sensitive to moisture balance. All papers cannot have the same working characteristics.

A certain amount of patience, experiment and experience is necessary in circumventing possible paper troubles. To blame the paper for all of our troubles before trying to understand them is poor policy. Different types of paper require entirely different techniques in handling. Soft rough papers require more pressure and more ink. More ink necessitates more water on the plate but fortunately such papers can stand a little

For over fifty years Roosen Offset Inks have been famous for outstanding performance. Constant research and testing through the years have led to improvements that help the industry serve new markets and that step up production and quality of every kind of offset job. Call the nearest Roosen office for practical assistance with your particular ink problem.

H. D. ROOSEN Co., Inc.

Division Columbian Carbon Co.

Foot of 20th and 21st Streets, Brooklyn, New York

CHICAGO 32
4250 W. 42nd Place

BOSTON
Kendall Sq. Bldg.
Cambridge

BALTIMORE
3432 Kenyon Ave.

MEXICO, D. F.
Sanchez & Cia.
Jose Marie Izazaqa No. 99
Antes San Miguel

HAVANA, CUBA
Inquisidor No. 513-515



- ① **Why are carbons pointed?**
So they will attain the best possible burning performance as soon after striking as possible.
- ② **Why do carbons have a central core?**
The central core holds special ingredients that promote steady burning and other materials that increase the brilliancy of the light.
- ③ **Does polishing carbons affect their burning?**
No. Carbons are polished so they will be cleaner to handle and also to provide a more perfect product.

- ④ **Why are "National" White Flame Carbons X-rayed?**

To insure a more uniform core structure.

- ⑤ **How many times are carbons inspected during manufacture?**

From raw materials to finished product, "National" White Flame Carbons are inspected more than 30 times at various stages of their manufacture.

The word "National" is a registered trade-mark of National Carbon Company, Inc.

NATIONAL CARBON COMPANY, INC.

Unit of Union Carbide and Carbon Corporation



30 East 42nd Street, New York 17, N. Y.
Division Sales Offices: Atlanta, Chicago, Dallas,
Kansas City, New York, Pittsburgh, San Francisco

BLANKOT

Reg. U.S. Patent Office

A NEW REMEDY FOR AN OLD CONDITION

BLANKOT is a liquid that immediately rectifies bad conditions of rubber blankets on offset presses, whether caused by grease and oil, water, or atmospheric conditions, all of which make rubber blankets unfit for use.

Apply BLANKOT with a soft rag or cheese cloth.

MANUFACTURED ONLY BY

MARTIN DRISCOLL & CO. ★ CHICAGO, ILL.

GREAT WESTERN PRINTING INK CO., PORTLAND, OREGON ★ BRANCH FACTORY, MILWAUKEE, WIS.

more water. Coated papers on the other hand should be printed with a minimum of pressure, ink and water. If the ink is strong the results will be brilliant. Each paper is a separate study.★★

Name School Offset Judges

W. H. Elliott, National Process Company; J. J. Rockwell, Sackett & Wilhelms Lithograph Corp.; and A. A. Freeman of Books By Offset Lithography, have been selected as the judges of lithographed school publications entered for awards at the annual convention of the Columbia Scholastic Press Association at Columbia University, New York, March 20-22. Certificates of Merit are awarded by the Lithographers National Association which sponsors this eighth annual competition.

News Man Will Open Plant

Lt. Col. Hugh H. Soper, cofounder in 1938 of the Owatonna (Minn.) Steele County Photo News as the nation's first photolithographic newspaper, was recently released from an

army hospital after eight months of treatment for war injuries.

Col. Soper pioneered with Miss Carol Marx, present publisher, in the establishment of the Photo News as a photolithographic newspaper.

Having secured an option on a full list of equipment for a medium-sized photolith plant while still in the Philippines, Col. Soper returned to the States and will investigate several sites for his new business in Georgia, South Carolina, Louisiana and Texas.

Kentucky Firm Expands

The Graphic Arts Co., Louisville, Ky., has recently completed an expansion program and has changed its name to Precision Litho Plate Co., Inc. It is located at 131 W. Main St.

New Offset Firm

The Industrial Offset Corp., 225 W. 39 St., New York, was recently organized by Stanley Leivent and Emil Menlo.


PERSONNEL PROGRAM

(Continued from Page 42)

papers, magazines, books and a piano. In the fall of 1946 a recreation committee was appointed to administer a recreation program. The profits on all cola, milk, candy and gum sold in the plant is placed in a recreation fund.

Music in Plant

All departments are connected with the central public address system and music is piped to all Co-workers throughout the plants and offices. Our library includes about 700 of the more popular records and music is played 30 minutes of each hour during the working day. A receptionist is on duty 30 minutes before work begins, during the noon hour and an extra 30 minutes at the close of the day to provide music during these periods. Throughout the holiday season loud speakers are placed on the front lawn and Christmas Carols are played each evening. The public address system is also used for making



LNA

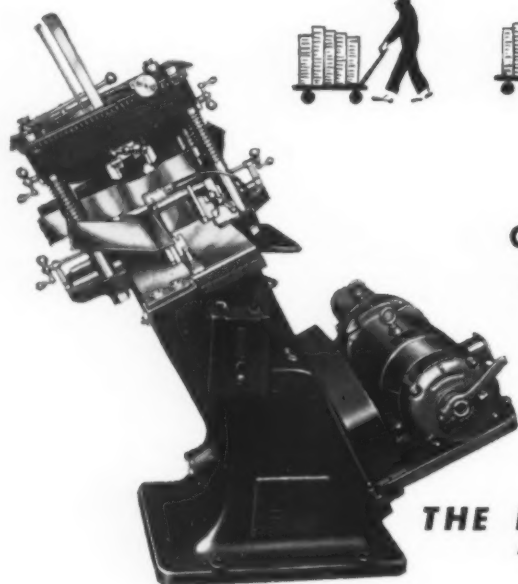
**ANNUAL
CONVENTION
NUMBER
MAY, 1947**

This big issue of Modern Lithography will be distributed at the LNA convention at Saranac Inn, N. Y. and will offer advertisers extra circulation and extra readership. Plan now to be represented in Modern Lithography's advertising pages.

DEADLINE: APRIL 25

MODERN LITHOGRAPHY, 254 W. 31 STREET, NEW YORK 1, N. Y.
BRYANT 9-4456

GREATER DIE CUTTING CAPACITY



Cuts up to 300,000 labels per hour.
Handles any hollow die label cut.
Cuts any size from 1" sq. to 6" sq.
Makes round corner trims on books, etc.
Unusually easy to adjust.

WRITE TODAY
FOR INFORMATION
AND PRICES

THE PRINTING MACHINERY COMPANY

436 Commercial Square • Cincinnati 2, Ohio

Eastern Sales Agency: E. P. Lawson Company
426 W. 33rd St., New York, New York

RELIABLE LITHOGRAPHIC PLATE CO., Inc.

The Pioneer Plate Grainers of America

ALL PLATES
INCLUDING THOSE
REGRAINED FOR
MULTILITH
ARE MARBLE
GRAINED

"RELIABLE" is far more than just part of our name. It means to our customers that our plates can be depended on to give first-class results because from start to finish the graining is handled by experts of long experience. Our plates are made right to work right—they are reliable!

We carry a full supply of Zinc and Aluminum Sheets for Offset, Rotaprint Presses, in fact for all the lithograph trade.

MILL
SELECTED
METAL
USED
EXCLUSIVELY
(MADE IN U.S.A.)

A trial order should "sell" you our services and products.

RELIABLE LITHOGRAPHIC PLATE CO.

INCORPORATED 1916

17-27 Vandewater St. and 45 Rose St., New York, N. Y. • Phone: BEekman } 3-4542
3-4531

special announcements of interest to our Co-workers.

Flat Tires

The company pays the bill when it is necessary to call a service station for a flat tire in the parking lot. In other words, when a Co-worker has a flat while at work, the service bill is paid by the company.

Telephone Calls

By special arrangement with the local telephone exchange all long distance calls coming from overseas veterans to their Co-worker families are paid for by the company. Co-workers whose relatives have served overseas and are due to return to this country register with the telephone exchange and when the call comes through, day or night, the cost is paid by the U. O. Colson Company. Our company had 29 Co-workers in service—besides many Co-workers who had husbands, wives, sons and daughters in service.

Free Credit

When the time comes for a Co-worker to buy a new refrigerator, to

repaint the house or to consolidate an accumulation of debts, the company will loan the money without interest. All advances made by the company are repaid without interest on a payroll deduction plan for the convenience of the Co-worker.

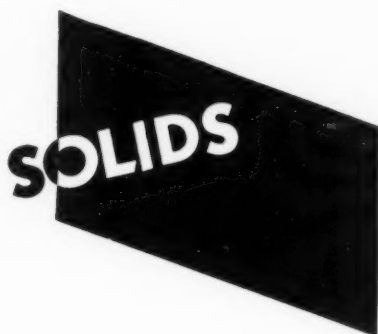
Signed by: Harold Ballard, Letterpress Dept.; Harold Bussart, Art Dept.; Joe Clearwater, Offset Press Dept.; Roy Dahlgren, Camera Dept.; Carl Downs, Maintenance Dept.; Mabel Grismer, Fabrication Dept.; Harold Hardy, Letterpress Dept.; Alberta Kroenung, Fabrication Dept.; Milton Miller, Offset Press Dept.; Gladine Melton, Finishing Dept.; Frank Payne, Proofing Dept.; and Louise Sprouls, Payroll Dept.

Modern Lithography asked U. Gordon Colson, company president, how long this program had been going on and how it is financed. The company has operated with such a program and such policies since its beginning in 1893, Mr. Colson said.

"Naturally when we started we were not able to do all of the things which we are now doing," he explained, "but throughout the years this program has been supplemented and we certainly expect to supplement it even further in the years to come." The company now has about 325 co-workers in addition to Colson salesmen on the road.

"The entire program is financed by the company and its coworkers," Mr. Colson stated. "The increased production and the teamwork developed by such a program serve to pay all the expenses in our opinion. The only expense to any coworker is for 50 percent of his group insurance (life, health, etc.) expense, the balance being paid directly by the company."

Mr. Colson described the basic policy of the company as follows: "The entire organization does not consist of any one or few men, but of each and every individual from the



Every Job's a Better Job
with
ECLIPSE OFFSET INKS

GAETJENS, BERGER & WIRTH, INC.

Manufacturers of Litho, Offset and Printing Inks, Varnishes and Driers

35 York St., Gair Bldg., Brooklyn 1, N. Y.

538 S. Clark St., Chicago 5, Ill.

WITH A BACKGROUND OF
21 YEARS
EXPERIENCE

we can give you a grain that will show better results in your pressroom.

All sizes new plates for both Harris and Webendorfer Presses, in stock for immediate delivery.

Graining and regraining of Aluminum and Zinc Plates.

We specialize in regraining Multilith Plates.

**WESTERN LITHO PLATE
& SUPPLY CO.**

1019 Soulard Street
 St. Louis 4, Mo.

Branch Plant:

**DIXIE PLATE GRAINING
CO.**

792 Windsor St. S. W.
 Atlanta, Georgia

**Makers of fine
OFFSET PLATES
and NEGATIVES**

FOR THE SOUTHWEST

DEEP ETCH & ALBUMEN
 PLATES FOR LARGE
 AND SMALL PRESSES

Specializing in
 MULTILITH & DAVIDSON
 PLATES

Perkins

WE OPERATE
 NO PRESSES

LITHO PLATE COMPANY

109 1/2 E. 12th St. FORT WORTH, TEXAS



janitor on up through the executives. If the executives were the only ones to come to work on Monday morning, we wouldn't worry much about it; however, if the executives were the only ones who came all during the week, then by Thursday morning we would probably close the front doors. Therefore, if the company is 'made' by Johnny Jones, Susie Smith, etc., we feel that the coworkers are the ones who should benefit from their teamwork. None of us has the slightest desire to be the richest man in the graveyard."

Besides Mr. Colson, other officers of the company are: U. Rae Colson, chairman of the board; Joe E. Harris, secretary-treasurer; Jack C. DeWitt, manager of the sales division; J. P. Gramling, assistant sales manager; Julius J. Kaiserman, manager of production division; Lawrence W. Travis, director of purchases, Rudolph H. Kienast, vice president in charge of technical art processes; and Rex R. Maltbie, manager of administrative division.★★

A SELLING PACKAGE

(Continued from Page 39)

his designs and recommendations make sense, he is able to sway opinion in favor of his solution.

As an example, on one occasion when some proposed new package designs were considered and rejected at first, I made this observation to the president of the company: "You have probably been looking at the old packages for the last 20 years. Of course, the new designs look startling to you. But the shape is more practical, the color scheme more appealing, it's easier to read—gives you better display value. Why not make this test: keep these packages on your desk and look at them every day for a week. If they're no good, you will be fed up with them. If, however, they have merit you will find yourself liking them more and more." At the end of the week, he telephoned me and said, "As you

know, I didn't like these new designs at first. But I've been looking at them every day as you suggested and they've grown on me. I think we've got something!"

And that is how those designs came to be accepted and placed on the market with success.

Winning the client's acceptance, then, is the first "selling" job. The second selling battle occurs after the new package is sent out to meet competition in the stores. I have great faith in the power of good package designs to influence sales, but they need assistance. This is where good displays come in. Beautiful lithographic reproductions of forceful displays for windows, counters, and walls work hand-in-hand with packages in making the most of opportunities at the point of sale. According to a recent duPont survey, 85% of all buying is done through the eyes. In grocery stores, 75% of the women bought one or more items on impulse. And three-fourths of such purchases were on display. Similar



**This can contains
more than
just ink!**

Into every can of Sinclair & Carroll ink goes the knowledge, experience and skill we have developed during many years of research and manufacture of lithographic inks. That's why Sinclair & Carroll has come to be known among lithographers as "a dependable source of supply."

SINCLAIR & CARROLL CO., Inc.

LITHO—INKS—OFFSET

591 Eleventh Avenue

CHICAGO
440 W. Superior St.
Tel. Sup. 3481

New York City

LOS ANGELES
417 E. Pico St.
Tel. Prospect 7296

SAN FRANCISCO
345 Battery St.
Tel. Garfield 5834

Tel. BRyant 9-3566

NEW ORLEANS
211 Decatur St.
Tel. Magnolia 1968

Now Available



**The New and Improved
Adhesive Back Covering**

For

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results were experienced in department stores and limited price stores. The ability of good packages, backed by good displays, to stimulate sales is keenly appreciated by alert manufacturers. The president of a soft-drink firm, a leader in its field, told me once that he had spent money promoting his business through the newspapers, magazines, radio, bill-boards, and point-of-sale displays. After careful study, he said, he had come to the conclusion that dollar for dollar, his firm had received greatest benefit from investments in point-of-sale lithographed displays.

Creation of a selling package calls for no magic or mysterious formula. It results from careful study, planning and much mental sweat. For example, a manufacturer calls a designer in and says his package is failing to do the kind of job it should. The designer looks over this package and may murmur to himself, "no wonder!" They come to terms, and the manufacturer tells the designer to go right ahead with the job of

redesigning. But instead of rushing off to prepare a lot of sketches it is advisable to have an informative discussion in which the president, sales manager, production manager, sales-promotion manager and the designer can join. The discussion covers the industry in general, competitive conditions, the good and bad in packages (including the client's) and a general airing of views. The designer may ask many questions and by listening, can gather much useful information. The designer must try to keep his mind open, to digest what is said.

Later, the designer goes out in the field to see things for himself as they relate to the new package under consideration. From the client and his staff the designer has obtained background or historical information, the trend of that particular industry, its acceptances, preferences, prejudices, etc. A personal survey provides first-hand information. Opinions are obtained, and also reports from others, not associated with the client.

Then, when sufficient "food for thought" has been gathered, the mind begins to simmer with ideas. These are developed, improved, or discarded. Finally they boil down to a few.

And then, at last, emerges *the IDEA*. When that idea clicks with me, I feel sure I have found the answer. It is tested under artificial light as well as in daylight. I put it away for a few days, look at it anew with a fresh eye. I live with it for several days more. If it gets the least bit tiresome, or my enthusiasm wanes, I know there's something wrong. Then I make changes or start all over again. But if it gives that "the more you see it, the better you like it" feeling, I become sold on it. There remains one more question. I ask myself "if, instead of the client's money, my own were to be spent on this package, would I recommend this design?"

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Photography

***Collodion Emulsions.** J. S. Mertle. "Modern Lithographer and Offset Printer" 42, No. 12, December, 1946, pp. 223-224 (2 pages). The use of collodion emulsion is compared with the use of dry plates with regard to economy, manipulation, and exposure. It is pointed out that collodion emulsion has considerable practical value but where uniformity and full control are called for gelatin dry plates should be used.

***Half-Tone Positives.** Martin Leeden. "Modern Lithographer and Offset Printer" 42, No. 12, December, 1946, pp. 224-5 (2 pages). The comparative value of retouching and dot correction is discussed. It is pointed out that dot etching is very useful in altering large areas of tone, but it is impractical for isolating any area to give a firm, clean edge. If the negative is skillfully retouched the results are better and the work takes less time. The use of retouching pencils, knives, and dyes in retouching technique is briefly described.

***Dyed Images on Vinylite, Acetate and Glass.** Anne Wahl. "Modern Lithography" 15, No. 1, January, 1947, pp. 31-32 (2 pages). A method is described for reproducing reversal line and halftone images on vinylite base plastics, as well as on cellulose acetate and collodion coated glass. Information is given on the selection of dyes to produce colors wanted and the formulation of the proper solvent mixture of dyes to produce colors wanted and the formulation of the proper solvent mixture to dye the vinylite without excessive penetration or spreading of the image. The procedure to follow in making revisions or corrections is described.

***Coated Process Lenses.** "Modern Lithography" 15, No. 1, January, 1947, pp. 33-34 (2 pages). This article is made up of excerpts dealing with coated lenses from the recent convention of the National Association of Photo-Lithographers in Washington. Generally, the feeling seems to be that: improved coated lenses will be on the market soon; benefits from coated lenses include reduction of flare and improved transmission, as well as sharper definition. One difficulty mentioned is that, after a period of a year or two the coating may gradually deteriorate within a few months' time until it is worse than before it was coated. It was mentioned also that the lenses which are coated during manufacture are more likely to accept a more durable coating than those which are coated later.

Lens-Calibrating System. C. R. Daily. "J. Soc. Mot. Pict. Eng." 46, May, 1946, pp. 343-56. The author describes a method for calibrating the effective f/-stop value of a camera lens in terms of the light transmitted by the lens. Owing to light losses within the lens, the f/-value determined in this manner will normally be numerically larger than the values obtained from the geometry of the lens. However, stop values based on transmission are of considerably greater value to a camera man than values based on aperture. An interrupted, collimated beam of light falls on the entrance port of an integrating sphere. The lens to be calibrated is centered over the opening and the light output from the sphere measured through a stable a.-c. amplified equipment. A calibration curve is then obtained for the equipment in which metal plates with holes of known diameters are placed over the entrance of the sphere in

place of the lens. The effective aperture of the lens is then defined as the size of opening which will pass the same total amount of light as the lens under calibration. This method avoids the use of secondary standards and should be capable of duplication in any laboratory. "Monthly Abstract Bulletin" of Kodak Research Laboratories 32, No. 10, October, 1946, p. 319.

***Improvement of Photographic Color Rendering By Correction Filters.** A. Van Kreveld. "Journal of the Optical Society of America" 36, No. 7, July, 1946, pp. 412-415 (4 pages). Multiplying factors of some photographic correction filters are calculated by means of the addition law and are found in fair agreement with the practical figures given by the manufacturers. The improvement of color rendering by the correction filters is calculated in the same way; it is very considerable. It is shown, that each filter can be characterized by three "improvement-factors," indicating the improvement of the green, yellow, and red colors, respectively. The improvement-factors are—in contradistinction to the multiplying factors—nearly independent of the color-sensitivity of the emulsion. It is argued that green correction filters are not generally useful, whereas (hypothetical) pale orange filters should yield the best possible color rendering.

Planographic Printing Surfaces

***Reversed Deep-Etch Photo-Litho With Ferric Salts And Gum Arabic** (2). P. C. Smethurst. "Process Engravers' Monthly" 54, No. 637, January, 1947, pp. 5, 7 (2 pages). When a ferric salt solution is poured into gum or gelatin solution, there is a local pH rise at the surface of contact between the two solutions and ferric hydroxide is readily precipitated, hardening the colloid in strings or clots except in the case of low concentration of colloid, in which event coating solutions are not light-sensitive immediately on coating but require maturing before use. To obtain a solution which is light-sensitive immediately on coating it is suggested that the gum solution be added in a thin stream to the solution of the ferric salt while the latter is being stirred vigorously. The permanent excess of ferric salts in the solution will then harden and at once redispersed the gum or gelatin. When coating on metal it is essential to use some kind of substratum to keep the metal base and sensitized layer away from one another to prevent the metal from being attacked by the acid.

***The Aller Process (Photo-Lithography).** A. Haigh and H. M. Cartwright. "Process Engravers' Monthly" 54, No. 637, January, 1947, p. 22 (1 page). In the Aller Process a very thin coating of copper is applied by

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***Metalithography (The "Alkuprint" Relief Printing Plate).** "British and Colonial Printer" 140, No. 952, January 17, 1947, p. 46 (1 page). The Alkuprint Relief Litho Process, evolved in Germany, is described. A base plate of aluminum or an aluminum alloy is surface-coated by means of a galvanising process with a durable copper alloy film. The drawing, transferring or photo printing down of the work is done on this surface. Then the non-image parts of this surface are etched down to the aluminum base. Claims made for this plate are: its printing surface is practically indestructible and is capable of extremely long runs; faithful reproduction; and advantages afforded by reduction in dampening moisture in this process.

Evaluation of the Roughness of Lithographic Printing Plates. G. A. H. Elton and G. Macdougall. "J. Soc. Chem. Ind." 65 (1946), pp. 212-15. The chemical and physical methods developed to evaluate the "grain" of lithographic printing plates are reviewed and current procedures for measuring the roughness ratio, the surface-void volume, and the grain depth are discussed. "Chemical Abstracts 41, No. 2, January 20, 1947, p. 543.

Process For Making Positive or Negative Printing Matrices By Addition. H. Eggen. "German Patent" No.

717,042. A process for making positive or negative printing matrices by addition is characterized by the use of a printing plate having a light-sensitive layer and a transparent light-sensitive film, the combination being exposed to light additively under a matrix whereupon the film is converted to a printing matrix and the combination is again exposed to light for a short time and the film separated. The underlying plate is then ready for use as a printing form. "Monthly Abstract Bulletins 32, N. 11, November, 1946, p. 391.

Equipment

***Converting the "Office Type" Press From Offset to Relief by Means of the Rubber Plate.** "Canadian Printer and Publisher" 56, No. 1, January, 1947, p. 36 (1 page). The steps necessary to accomplish this conversion are as follows: remove damper; remove blanket from blanket roll; mount rubber plate (with adhesive back) directly on the blanket roll or cylinder; put grained plate on plate roll to act as inking roller. Ink goes from regular inking roller to grained plate, then to rubber plate. Job delivers in normal way. No other major adjustments are necessary. Illustrations are given.

Lithographic Platemaking Apparatus. James T. Campbell. "U. S. Patent" No. 2,412,317 (December 10, 1946). Apparatus for processing exposed film for the making of lithographic plates comprising an insulated support, a temperature controlled sink nested within said insulated support, developing and fixing bath trays supported upon and partially immersed within said sink within a fluid therein, a washing tray supported upon and disposed within said sink with its under surface above the level of fluid therein, a fluid source to said washing tray, a removable stand pipe in said wash tray, a drain pipe extend-

ing below the bottom thereof, a stand pipe in said sink, into which said wash tray drain may be removably inserted, and a second drain pipe joined to said sink stand pipe and disposed through said sink and said insulated support for conducting fluid from said wash tray independent of the fluid within said sink. "Official Gazette" 593, No. 2, December 10, 1946 p. 204.

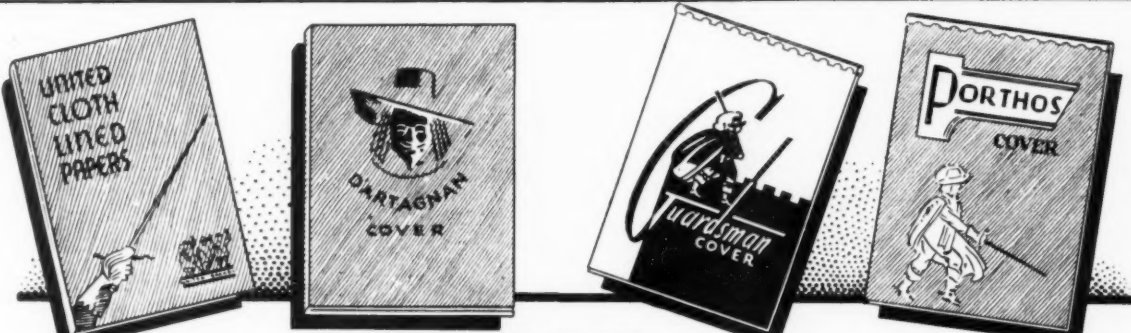
Paper and Ink

Definition and Measurement of Gloss. V. G. W. Harrison. The Printing and Allied Trades Research Association, London, England. 10/-. An extensive study of the objective and subjective factors in the sensation of gloss. Attempts at practical gloss measurement have followed six different theories. The various methods are described and their advantages and limitations discussed. Much work remains to be done in the direction of correlation of existing methods with one another and with visual judgments. The bibliography contains 180 references.

***Structure and Makeup of Printing Inks.** Ted Prime. "American Ink Maker" 25, No. 1, January, 1947, pp. 37, 39, 53 (3 pages). The principal materials used in ink manufacture may be divided into three classes: Vehicle, pigment, and drying agent. These are discussed. The ink maker must know both the chemical and physical properties of the materials he works with and what he can expect when he mixes these materials. The trend is toward fast setting inks, examples of which include gravure inks, heat-set inks, and moisture-set inks. The properties and uses of these various inks are described.

General

***New Developments and Products.** "National Lithographer 54, No. 1, January, 1947, pp. 28, 29 (2 pages). Some
(Continued on Page 105)



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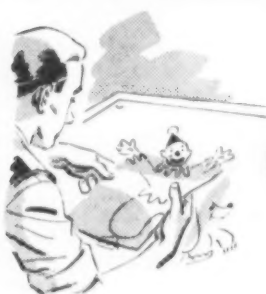
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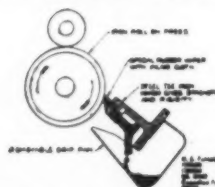
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Miscellaneous:

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PRESS WANTED: Tin Lithographing Hoe or Potter Press. Address Box 586 c/o Modern Lithography

WANTED by July 1, 1947—2 offset presses size between 17x22 and 22x34. J. Sofnas, 827 E. 46 St., Indianapolis, 5, Indiana

LITHOGRAPHERS — Have you originals of pictorial designs suitable for use as stock advertising calendar subjects? Canadian Company would like to purchase either the finished lithographed material, prints, roll calendars, blotters, mailing cards, etc., or originals in the form of film positives or negatives, for reproduction in Canada. Write giving particulars of anything you can supply. Address Box 587 c/o Modern Lithography

For Sale:

FOR SALE: Underwood type-writer, Century Book Face, carbon ribbon for reproduction, 14" carriage, justifying device. Price—\$80. Address Box 588 c/o Modern Lithography

EARLY DELIVERY—New vacuum printing frames, whirlers and stripping tables. Singer Engineering Co. For complete plate making equipment. 248 Mulberry St., New York, Walker 5-7625.

FOR SALE: Excellent Buy! Eastman Blue Sensitive film 12 x 17. Government surplus. \$32. Gross. Address Box 589 c/o Modern Lithography.

FOR SALE: PLATES—Lithograph—sink—new & used—grained & ungrained Multilith plates Model 2066 Standard & special drum, and 1250. Sizes 20 1/4 x 20 1/2, 15 1/4 x 20 1/2 and 10 x 15 1/4 overall. Webendorfer Little Chief 20 and Model M. Davidson 221. Plates to fit any press smaller than 17 x 22. O. E. Calloway, P. O. Box 268, Fort Worth, Texas.

FOR SALE: Vacuum frame 16 x 20 complete—\$85. Levy 150 screen excellent approx. 10 1/2 x 12 1/2—\$85. Address Box 590 c/o Modern Lithography

OVERSTOCK OF PERFECT FILM for sale: Prices far below pres-

ent list. 23 doz. Kodolith Blue Sensitive 20x24. 69 doz. Eastman Commercial Ortho 20x24. 68 doz. Ansco Commercial Ortho 24x30. Telephone WA 5-6439, New York, or write Box 591 c/o Modern Lithography.

FOR SALE: 16 1/2" circular, 150 line screen, Levy Intl. Perfect condition. Address Box 592 c/o Modern Lithography

FOR SALE: 1—30 inch Goerz Lens—practically new, 6 months in use Apochromat Artar with Douthitt Control. Chromolith Co., Inc., 333 Hudson St., New York, 13, N.Y.

FOR SALE: Gallery type floor model Robertson all metal process camera 24" x 24". 5 x 6' wooden copy-board. Completely overhauled. 19" Goerz lens. 10"x12" 120 line International halftone screen, \$5900. FOB Linden, New Jersey. Price \$2500. Long Engineering Research Corp., 1025 W. Blancke St.

FOR SALE. 44 x 64 Hall offset press with UPM bronzer connected. In excellent condition. Available for immediate delivery. Priced for quick removal. Address Box 594 c/o Modern Lithography.

THIS MONTH'S specials in high grade lenses: 4 1/4"—F:9 Carl Zeiss Apo Planar in barrel, coated—\$49.50; 9 1/2"—F:9 Carl Zeiss Apo Tessar in barrel, coated—\$219.50; 11"—F:8 Cooke Process Ser. V in barrel, coated—\$117.50; 10 1/2"—F:18 Carl Zeiss Protar V in barrel, \$34.50; 10 3/4"—F:9.5 Goerz Artar in barrel, coated, \$175.00; 12"—F:9 Goerz Apo Artar in barrel, coated—\$185.95; 12"—F:9 Carl Zeiss Apo Tessar in barrel, coated—\$249.70; 15 1/2"—F:10 Wollensak Process in barrel—\$174.50; 16"—F:8 Wollensak Process in barrel—\$150.00; 16"—F:16 Wollensak Process in barrel, coated—\$117.50; 16 1/4"—F:8 Hermagis in barrel, coated—\$163.50; 16 1/2"—F:11 Goerz Alethar in barrel, coated—\$142.50; 18"—F:9 Carl Zeiss Apo Tessar in barrel, coated—\$279.50; 18"—F:8 Graf Process in barrel, coated—\$153.00; 18 1/4"—F:10 Cooke Ser. V in barrel, coated—\$167.50; 19"—F:7.7 Goerz Dagor in barrel with iris—\$359.50; 20"—F:5 Carl Zeiss Tessar in barrel, coated—\$720.00; 21"—F:10 Bausch & Lomb Process in barrel, coated—\$261.50; 23 1/2"—F:9 Schneider Apo Claron in barrel, coated—\$249.50; 24"—F:9 Carl Zeiss Apo Tessar in barrel, coated—\$465.00; 32"—F:10 Carl Zeiss Apo Planar in barrel, coated—\$1000.00; 41"—F:11 Carl Zeiss Apo Planar in barrel, coated—\$1412.00; 48"—F:7 Carl Zeiss Anastigmat in barrel—\$2250.00; 48"—F:11 Carl Zeiss Apo Tessar in barrel, coated—\$1645.00; 48"—F:9 Carl Zeiss Apo Tessar in barrel, coated—\$1800.00; 52"—F:12.5 Carl Zeiss Apo Planar in barrel, coated—\$1800.00;

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list ML3. All lenses sold on a 15 day trial basis; satisfaction guaranteed or full refund; 50 years of service. Will pay spot cash for your surplus lenses. Tell us what you have or send them in for appraisal. Write today. Burke & James, Inc., 321 S. Wabash Ave., Chicago 4, Ill.

Mayer Forms Ink Co.

Continental Printing Ink Co., 2142 Lombard St. at 22nd St., Philadelphia, was organized recently by Horace Mayer. Mr. Mayer was vice president of Sleight Metallic Ink Co. for 12 years. The plant occupies about 10,000 square feet of floor space and operates five mills, three mixers, and other equipment.

Champion Elects Rowe

John J. Rowe, Cincinnati, has been elected a director of The Champion Paper and Fibre Company, Hamilton, Ohio, according to announcement by Reuben B. Robertson, president of the company. Mr. Rowe is president of the Fifth Third Union Trust Company of Cincinnati. He holds directorships on the boards of 20 companies, including The Philip Carey Manufacturing Co., Crosley Motors, Inc., Eagle Picher Co., General Machinery Corporation, Globe-Wernicke Company, Procter and Gamble Co., U. S. Printing and Lithographing Co. Mr. Rowe also has been active in civic affairs in Cincinnati, and has served as chairman of the American Red Cross of Cincinnati and Hamilton County, and the War Finance Committee of the Fourth Federal Reserve District. A graduate of Harvard University, he has served as president of the Alumni Club of Cincinnati. He is chairman of the Finance Committee of the University of Cincinnati.

New DuPont Facilities

New facilities for coating photographic paper will soon be in operation at the duPont Company's plant in Rochester, it was announced by Frederick B. Sackett, the company's plant manager. Installation of equipment is now complete in one of two new paper coating and drying tunnels. Mr. Sackett said.

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can: 17 x 22"—\$5.50; 22 x 29"—\$7.50. Mercury—
17 x 22"—\$6.00; 22 x 29"—\$7.50.

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Complete Copy Preparation

TECHNICAL BRIEFS

(Continued from Page 99)

machines and processes developed or improved during the past year are discussed.

***Photomechanical Review.** J. S. Mertle. *National Lithographer* 54, No. 1 January, 1947, pp. 34, 77 (2 pages). Trivison prints, the indirect process, rapid fixing baths, and deep etch plates made by using the new electron Intaglio Plate are discussed.

***Lack of knowledge of the Fundamentals Still Hampers Offset Process.** Charles F. King. "Inland Printer" 118, No. 4, January, 1947, pp. 51-54 (4 pages). It is pointed out that, since so little is known about the basic principles of the lithographic process, all that can be done is to attempt to standardize materials and operations on the basis of experience.

***Lithography as Found in Germany.** Part III. Paul W. Dorst. "Modern Lithography" 15, No. 1, January, 1947, pp. 43, 45, 46 (3 pages). Photographic equipment, lithographic plates, press work, and mapping techniques as found in Germany are discussed. On the whole, recent German lithographic techniques are not far different from those practiced in the United States; however, some differences in detail do exist.

***Lithographers' Town Meeting.** Part II. "National Lithographer" 54, No. 1, January, 1947, pp. 32, 33, 82, 83 (4 pages). This is the second part of a transcript of the Technical Panel Discussion that took place at the convention of the Lithographers National Association.

"Alterproof" Paper Having Negative and Positive Designs on Opposite Sides. J. D. Ross, assignor to International Business Machines Corporation. "U. S. Patent" No. 2,396,391. Made by coating a pair of similar electro rollers with light-sensitive material, covering the rollers with films having negative and positive images of the design, exposing the rolls to light, etching them, and then using the rolls to print paper passed between them. "Monthly Abstract Bulletin" of the Kodak Research Laboratories 32, No. 10, October, 1946, p. 357.

***Music Printing.** "British and Colonial Printer" 140, No. 952, January 17, 1947, p. 40 (1 page). Music printing is more closely connected with engraving than with lithography. Quite a lot of music is still produced by the hand stamping process using pewter plates. However two other methods now being used, both photographic, are: Preparation of paper negatives direct from the plates; and the normal photographic reproduction of a correctly drawn copy.



ADVERTISERS' INDEX

MARCH, 1947

Acme Litho Plate Graining, Inc.	104	Macbeth Arc Lamp Co.	96
Aetna Paper Co. Div.	21	Mallinckrodt Chemical Works	Feb.
Aljen Associates	104	Mark & Sons, John G.	102
American Graded Sand Co.	Feb.	Marvellum Co., The	Feb.
American Type Founders	8	Mason-Moore-Tracy, Inc.	100
American Writing Paper Corp.	Feb.	Maxwell Paper Mills	56
Anso	24	Mead Corp., The	Feb.
Baker Reproduction Co.	104	Merck & Co., Inc.	102
Bartels Co., Gordon	Feb.	Miehle Printing Press & Mfg. Co.	Feb.
Baum, Russell Ernest	102	Miller Printing Machinery Co.	4
Bensing Bros., & Deeney	73-74	Mohawk Paper Mills, Inc.	Feb.
Bingham Bros. Co.	82	Monk, C. O., Inc.	17
Bingham's, Sam'l, Son Mfg. Co.	22	Moore Laboratories	96
Both, Otto A., Corp.	Feb.		
Bulkley, Dunton & Co.	6	National Association of Photo-Lithographers	10
		National Carbon Co.	88
California Ink Co.	104	National Photocolor Co.	64
Cantine Co., Martin	3rd Cover	Nenah Paper Co.	62
Carew Mfg. Co.	Feb.	Nekoosa-Edwards Paper Co.	Feb.
Central Compounding Co.	85	Norman Willets Graphic Supply Co.	96
Champion Paper & Fibre Co.	28	Northwest Paper Company	23
Charlton, F. M., Co.	49		
Chillicothe Paper Co.	25	Oxford Paper Co.	12
Coxhead Corp., Ralph C.	Feb.		
Craftint Mfg. Co.	100	Paisley Products, Inc.	Feb.
Cramer, G., Dry Plate Co.	98	Paper Sales Corp.	78
Creative Prods. Co.	100	Parker Printing Preparations Co.	102
Crescent Ink & Color Co.	94	Parsons Paper Co.	9
Crocker-McElwain Co.	69	Photo-Litho Plate Graining Co., The	Feb.
		Pitman, Harold M., Co.	27
Dayton Rubber Mfg. Co.	46	Process Color Plate Co.	100
Di-Noc. Co.	Feb.	Printers' Exchange	101
Direct Reproduction Corp.	Feb.	Printing Machinery Co.	90
Dixie Plate Graining Co.	92	Perkins Litho Plate Co.	92
Driscoll, Martin, Co.	88	Process Litho Arts, Inc.	Feb.
Du Pont, E. I. de Nemours & Co.	58		
		Rapid Roller Co.	Feb.
Eastern Corp.	60	Rathbun & Bird	102
Eastman Kodak Co.	43	Reinhold-Gould, Inc.	Feb.
Electron Lithoplate Corp.	80	Reliable Lithographic Plate Co.	90
Esleek Mfg. Co.	Feb.	Rising Paper Co.	71
		Roberts & Porter, Inc.	3
Falulah Paper Co.	66	Roosen, H. D., Co.	87
Fitchburg Paper Co.	86	Rutherford Machinery Co., Div.	68
Fox River Paper Co.	18		
French, Chas. A., & Co.	Feb.	Senefelder Co., Inc.	2nd Cover
Fuchs & Lang Div.	19 & 20	Shostal Press Agency	104
		Siebold, J. H., & C. B., Inc.	80
Gaetjens, Berger & Wirth, Inc.	91	Sinclair & Carroll Co.	93
Gegenheimer, Wm., Inc.	98	Sinclair & Valentine Co.	15 & 84
General Scientific Products	Feb.	Sleight Metallic Ink Companies	102
Godfrey Roller Co.	14	Southworth Machine Co.	Feb.
Goetz American Optical Co., C. P.	98	Spero, J. & Co.	Feb.
Graphic Arts Corp.	11	Sperry Corp.	26
Graphic Process & Products Corp.	104	Standard Tag Co.	94
Gummed Products Co.	Feb.	Stevenson Photo Color Separation Co.	102
		Strathmore Paper Co.	Feb.
Hammermill Paper Co.	Feb.	Syntron Co.	Feb.
Handschy, A. E., Co.	98		
Harris-Seybold Co.	44 & 4th Cover	Triangle Ink & Color Co.	96
Hoe & Co., R.	50		
Howard Paper Mills	55	United Mfg. Co.	99
Hunt, Philip A., Co.	7		
		Vasel Mfg. Co.	94
International Paper Co.	48	Vulcan Proofing Co.	72
International Press Cleaner & Mfg. Co.	100		
International Printing Ink	Feb.	Warren, S. D., Co.	Jan.
		Western Litho Plate & Supply Co.	92
Johnson Co., Charles Eneu	54	Weston, Byron, Co.	52
		Whiting-Plover Paper Co.	45
Kimble Electric Co.	Feb.		
Kohl & Madden Printing Ink Co.	76	Zarkin Machine Co.	13
		Zarwell, H. D.	100
Lawson Co., E. P.	70		
Litho Chemical & Supply Co.	47		
Lithographic Plate Graining Co. of America	95		
Lithographic Technical Foundation	16		
Lithographers Service Co.	72		

(The Advertisers' Index has been carefully checked but no responsibility can be assumed for errors or omissions.)



Sad, but true!

AND what ever became of the Schmaltz Pickle Foundry? Gone? Forgotten? Yes! In flush times when the demand for their hand-forged pickles was double the supply, they thought it would last forever. They forgot to remember to keep reminding the world about Schmaltz pickles,—and unfortunately the world forgot.

Now, we don't know a whole lot about pickle advertising, but when it comes to the field of Lithography, we are certain that they will never get a chance to forget you if you advertise regularly in

MODERN LITHOGRAPHY

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Member, Audit Bureau of Circulations

TALE ENDS

KILROY was here . . . and, "Mister, he's a-comin' back," is the attention-getter on a folder sent out recently by R. R. Donnelley & Sons Co., Chicago. The general theme of it is to make the best of the present good times, and save regularly. Begin saving today, not tomorrow, nor next week, the copy urges. The promotion piece was used to get Donnelley employees to save systematically through the company's own savings plan. Copies are offered to other companies for imprinting, by Edward B. Busby, Donnelley vice president in charge of personnel.

★

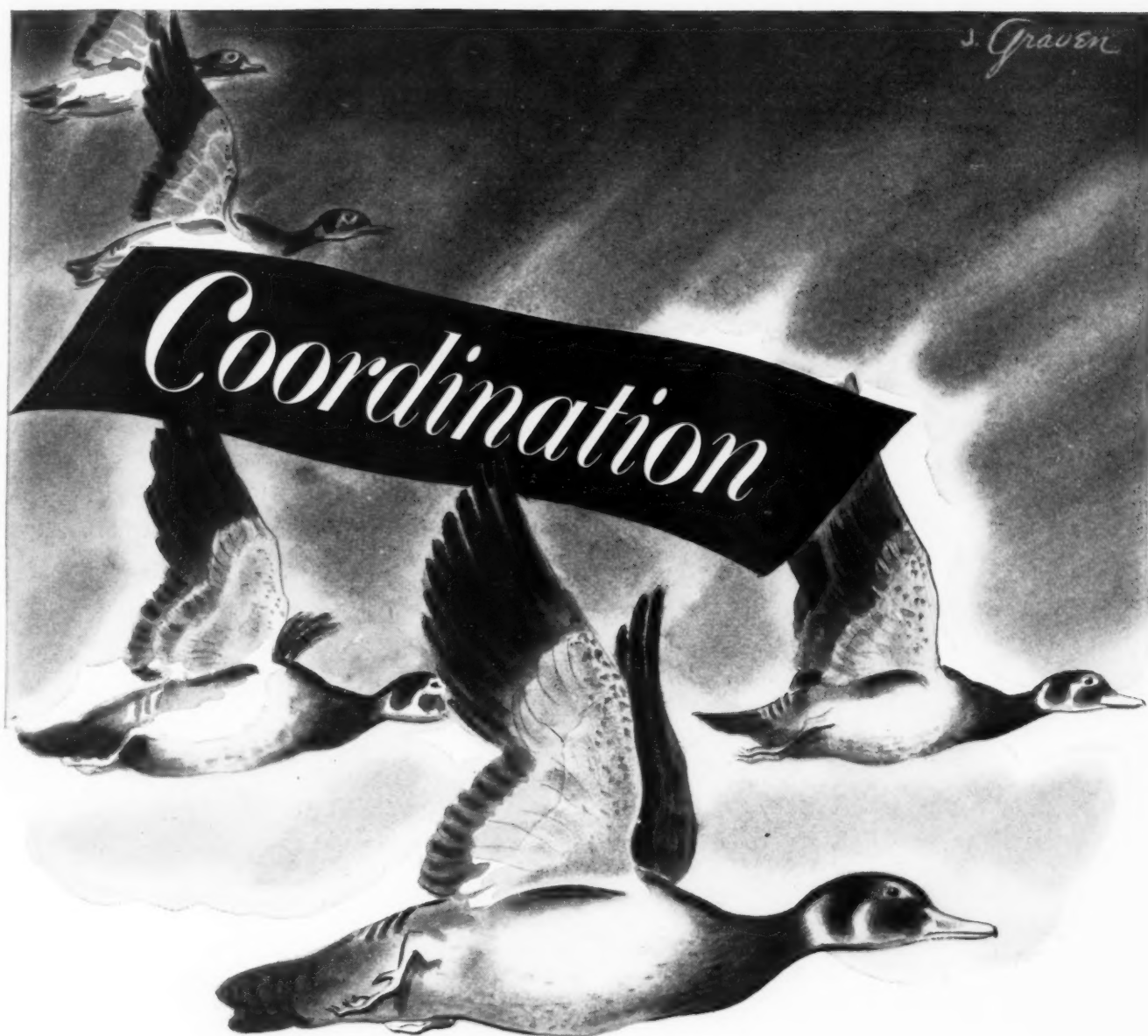
A two-color lithographed folder promoting fluorographic lithography "the newest addition to our facilities" was recently distributed by McCormick-Armstrong Co., Wichita, Kan. The folder contains a number of comparisons of halftones reproduced by ordinary lithography where highlights are grayed and contrast is lost with fluorographic halftones with highlight dots dropped out.

★

Both the Hart Printing Co., and the George D. Barnard Co., St. Louis lithographers, have installed wired music service in their plants. Through the humdrum drone of presses come the soft strains of soothing music, or the martial rhythms of marches, depending upon the time of day. It's scientifically planned to enhance the pleasure and efficiency of employees.

★

A gift of 100 lithographic reproductions of famous paintings was received recently by Winter Veterans Hospital, Topeka, Kan., from Charles Ward, president of Brown & Bigelow Co., St. Paul calendar lithographers and printers. Added to the collection of pictures and maps they will help decorate the hospital's seven miles of corridors.



In nature, swift and smooth processes work in principles of harmonious coordination. Where these principles are applied to affairs that have been thrown off-stride by recent world upheavals, many serious problems disappear.

The Martin Cantine Company—well coordinated for nearly sixty years of coating paper—is preparing to render more service than ever by increasing its output and thereby making high quality printing more generally available for the swift, smooth coordination of general affairs.

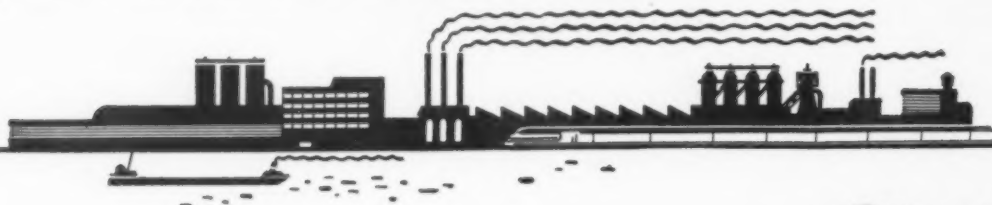
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Specialists in Coated Paper Since 1888

Cantine's Coated Papers

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Calendars . . .

Think how many persons depend upon calendars in their daily living. Quite frequently, the calendar comprises the major advertising effort of the smaller retail outlets. Day in and day out, calendars do an excellent job of "reminding" and keep their advertising messages alive throughout the entire year.

Offset lithography has long been the logical choice for calendar making. Larger lithographic shops have made a profitable specialty of it. Because calendars can be produced practically any time during the year, smaller shops have found them to be excellent "fillers".

Large spreads of eye-catching color, at minimum plate cost . . . faithful reproduction of color subjects . . . greater press speeds . . . are but a few reasons for the popularity of offset lithography with buyer and producer alike.

The speedy, new Harris 17 x 22" single-color offset press, with fast plate changes, simple and trouble-free adjustments, four form rollers for superior small-press inking and speeds up to 7,000 sheets per hour, produces an especially high daily quota of salable sheets.

Whether used to run date pads or short-run work in large shops, or as the principal production unit in smaller lithographic or combination shops, no other press of its size will give you a better run for your money.

You will want to read "Why Offset Lithography Is on the March"—a new 24-page, 4-color book produced on the new Harris Model 122, 17 x 22" Offset Press. It's a sample of work that will interest small offset shops, combination shops or large lithographers. Send for it today.

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